STR-GX49ES

SERVICE MANUAL

US Model
Canadian Model

- STR-GX49ES is similar to the earlier STR-GX47ES (US, Canadian model).
- Refer to STR-GX47 service manual for imformation not contained in this service manual .

PARTS LIST

Page	STR-GX47ES		STR-GX49ES	
	Ref. No.	Part No.	Part No.	Description
34	55	A-4323-979-A	A-4325-600-A	PANEL ASSY, FRONT
36	160	＊4-944-550-01 ＊4-944-550-11	＊4-944-550-51	PANEL, BACK
39		＊A-4323-062-A	＊A-4347-561-A	MOUNTED PCB, MAIN (US)
		＊A-4345-076-A	＊A-4347-562-A	MOUNTED PCB, MAIN (Canadian)
40	C836	1-125-614-11	1-125-615-11	ELECT 10000 μF 20% 50V
	C837	1-125-614-11	1-125-615-11	ELECT 10000 μF 20% 50V
	D401 D701 〜 D705 D751 〜 D753	8-719-912-20	8-719-987-63	DIODE 1N4148M
46		3-753-168-21	3-755-038-21	MANUAL INSTRUCTION (English)
			3-755-038-31	MANUAL INSTRUCTION (Canadian) (French)
		＊4-945-641-01	＊4-952-783-01	INDIVIDUAL CARTON

Note:
Items marked "＊" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

FM STEREO/FM-AM RECEIVER

SONY®

English
92D0535-1
Printed in Japan
© 1992. 4

Sony Corporation
Audio Group

9-957-076-11

Published by Customer Relations and Service Group

STR-GX47ES

SERVICE MANUAL

US Model
Canadian Model

SPECIFICATIONS

Audio Power Specifications

POWER OUTPUT AND TOTAL HARMONIC DISTORTION

With 8-ohm load, both channels driven, from 20 - 20,000 Hz, rated 50 watts per channel minimum RMS power, with no more than 0.08% total harmonic distortion from 250 milliwatts to rated output.

Other Specifications

Amplifier section

Dynamic power output
- 75 watts + 75 watts (8 ohms, at 1 kHz IHF)
- 100 watts + 100 watts (4 ohms, at 1 kHz IHF)
- 105 watts + 105 watts (2 ohms, at 1 kHz IHF)

Harmonic distortion
- Less than 0.08% at rated output

Frequency response
- PHONO: RIAA equalization curve ±0.5 dB
- CD, TAPE, VIDEO, TAPE MONITOR: 5 Hz - 50 kHz $^{+0}_{-1}$ dB

Residual noise: Less than 70 µV (8 ohms, network A)

Damping factor: 50 (8 ohms, 1 kHz)

Inputs

	Sensitivity	Impedance	S/N (weighting network, input level)
PHONO	2.5 mV	50 kilohms	87 dB 79 dB* (A, 2.5 mV)
CD, VIDEO TAPE, TAPE MONITOR	150 mV	50 kilohms	105 dB 86 dB* (A, 150 mV)

* '78 IHF

Outputs: VIDEO AUDIO OUT
REC OUT
- Voltage 150 mV
- Impedance 10 kiloohms

SPEAKER A, B
- Accepts speakers of 4 – 16 ohms.

HEADPHONES
- Accepts low and high impedance headphones.

Tone controls: BASS: ±8 dB at 100 Hz
TREBLE: ±8 dB at 10 kHz

Muting: –20 dB

— Continued on next page —

FM STEREO/FM-AM RECEIVER

SONY

FM/AM tuner section

	FM tuner section	AM tuner section
Tuning	87.5 — 108 MHz	530 — 1,710 kHz (with the AM tuning interval set at 10 kHz) 531 — 1,710 kHz (with the AM tuning interval set at 9 kHz)
Antenna	300 ohms,balanced 75 ohms, unbalanced	External antenna terminal, loop antenna
Intermediate frequency	10.7 MHz	450 kHz
Sensitivity at 50 dB quieting	18.3 dBf, 4.5 µV (mono) 38.3 dBf, 45 µV (stereo)	—
Usable sensitivity	11.2 dBf, 2 µV (IHF)	Loop antenna: 50 dB/m (at 1,000 kHz) External antenna: 100µV (at 1,000 kHz)
Signal-to-noise ratio	82 dB (mono) 76 dB (stereo)	54 dB (at 50 mV/m)
Harmonic distortion	0.1% (mono), 0.2% (stereo) at 1 kHz	0.3% (at 50 mV/m, 400 Hz)
Selectivity	60 dB at 400 kHz	40 dB at 10 kHz 35 dB at 9 kHz
Separation	45 dB at 1 kHz	
Frequency response	30 Hz — 15 kHz $^{+0.5}_{-1.5}$ dB	
IM distortion	0.1% (mono) 0.2% (stereo)	
Capture ratio	1.2 dB	
AM suppression ratio	54 dB	
Image response ratio	80 dB	
IF response ratio	90 dB	
Spurious response ratio	100 dB	
RF Intermodulation	65 dB (800 kHz)	
Auto tuning threshold	30 dBf	

General

System	Tuner section: PLL quartz-locked digital synthesizer system Preamplifier section: low-noise NF type equalizer amp Power amplifier section: pure-complementary SEPP
Power requirements	120 V AC, 60 Hz
Power consumption	USA model: 140 watts Canadian model: 270 VA
AC outlets	Two switched USA model: 100 W Canadian model: 120 W/1A
Dimensions	Approx. 430 x 135 x 375 mm (w/h/d) (17 x 5 $^{3}/_{8}$ x 14 $^{3}/_{4}$ inches) including projecting parts and controls
Weight	Approx. 8.1 kg (17 lb 14 oz) net Approx. 9.5 kg (21 lb) in shipping carton
Accessories supplied	FM wire antenna (1) AM loop antenna (1) Remote Commander (1) RM-S103 Sony batteries SUM-3(NS) (for the remote commander) (2)

Design and specifications subject to change without notice.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE TRAME ET UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

TABLE OF CONTENTS

Section	Title	Page
Specifications		1
Safety Check-out		3
1.	**GENERAL**	
	Parts Identification	4
	Connecting The System	5
2.	**ELECTRICAL ADJUSTMENTS**	
	FM Section	6
	AM Section	7
	AMP Section	7
3.	**DIAGRAMS**	
3-1.	Block Diagram	8
3-2.	MAIN, PS TERMINAL, TONE, VOL, POWER SUPPLY Section Schematic Diagram	11
3-3.	MAIN, PS TERMINAL, TONE, VOL, POWER SUPPLY Section Printed Wiring Boards	15
3-4.	TUNER, DISPLAY Section Schematic Diagram	19
3-5.	TUNER, DISPLAY Section Printed Wiring Boards	23
3-6.	Explanation of IC301 (μPD75206)	29
4.	**EXPLODED VIEWS**	33
5.	**ELECTRICAL PARTS LIST**	37

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety check before releasing the set to the customer:
Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microampers). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2 V AC range are suitable. (See Fig. A)

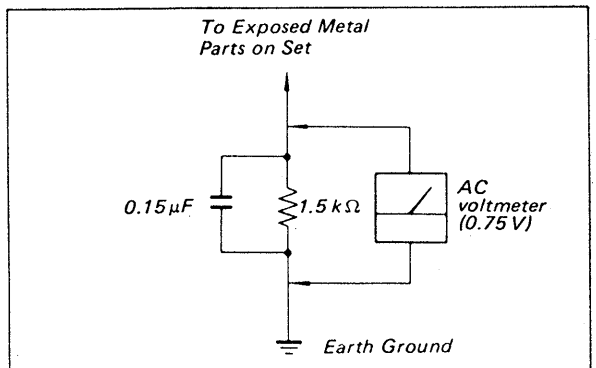
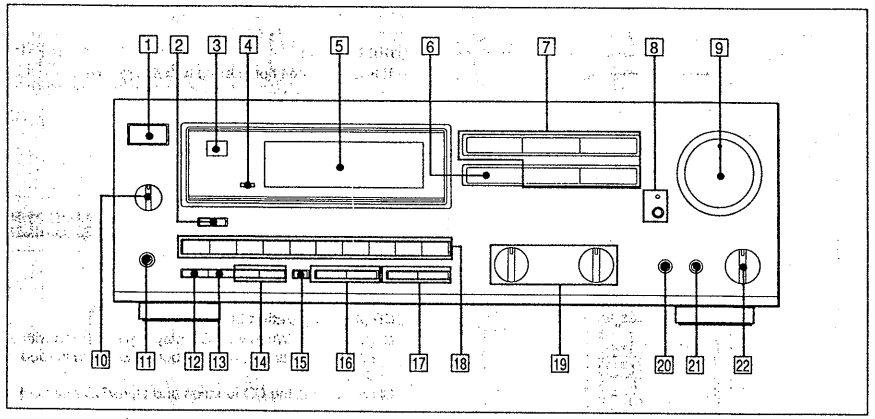


Fig. A. Using an AC voltmeter to check AC leakage.

Parts Identification

Front Panel



1 **POWER switch**

2 **SHIFT button** (Pages 13 and 14)

3 **Remote control sensor**

4 **TAPE MONITOR indicator**

5 **Display window**

6 **TAPE MONITOR switch** (Page 15)

7 **Function selectors**

8 **MUTING button and indicator** (Page 11)

9 **ATTENUATOR and indicator** (Page 11)

10 **SPEAKERS selector** (Page 8)

11 **HEADPHONES jack**

12 **FM MODE button** (Page 12)

13 **FM TUNE MODE switch** (Pages 12 and 13)

14 **FM/AM BAND selectors** (Pages 12 and 13)

15 **MEMORY button** (Page 13)

16 **TUNING –/+ buttons** (Pages 12 and 13)

17 **PRESET TUNING –/+ buttons** (Page 14)

18 **Numeric buttons** (Pages 13 and 14)

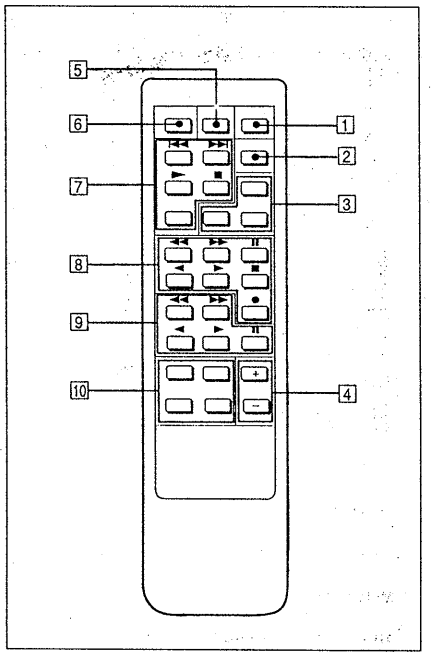
19 **TONE controls** (Page 11)

20 **SOURCE DIRECT button** (Page 11)

21 **LOUDNESS switch** (Page 11)

22 **BALANCE control** (Page 11)

Remote Commander RM-S103



1 **POWER button**

2 **DBFB button**
This button does not operate with this receiver.

3 **TUNER PRESET +/– and SHIFT buttons**
(Pages 13 and 14)

4 **VOLUME +/– buttons**

5 **SURROUND button**
This button does not operate with this receiver.

6 **MUTING button** (Page 11)

7 **CD player operation buttons***
D. (disc) SKIP: When your CD player is equipped with a multi-disc changer, use this button to select loaded disc.
CD ►: Selects the CD function and starts CD playback.

8 **DECK B operation buttons*** (also for single tape deck)
DECK B ◄/►: Select tape function and start tape playback on deck B.

9 **DECK A operation buttons***
DECK A ◄/►: Select tape function and start tape playback on deck A.

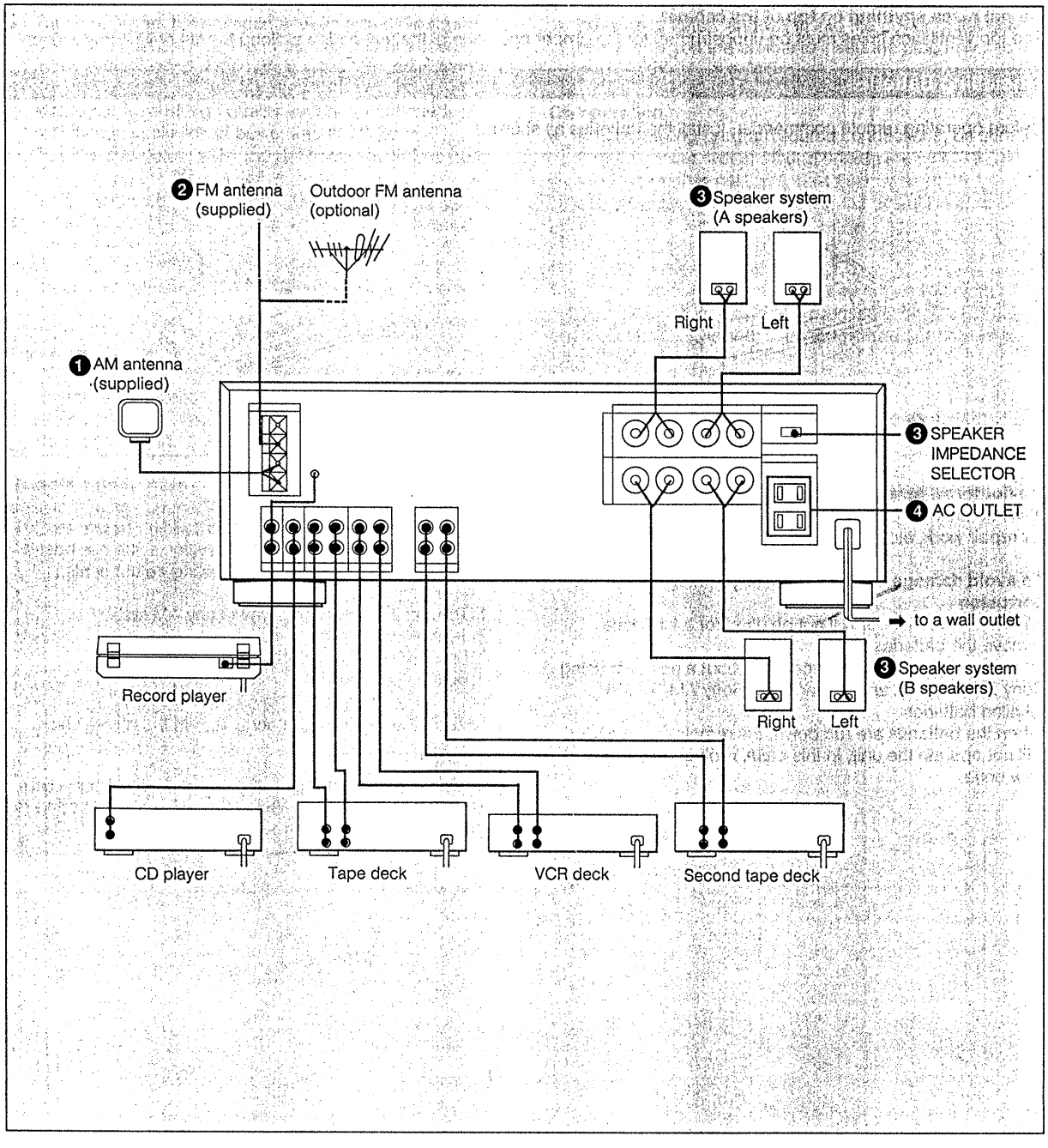
10 **Function select buttons**

* These buttons control Sony audio components.

Connecting the System

Notes on Connection

- The power cord should be connected last of all, after making sure that the POWER switch is turned off.
- The cable connectors should be fully inserted into the jacks. A loose connection may cause hum and noise.
- Cord plugs and jacks are color coded. The red plugs and jacks are to be connected to the right channel(R) and white ones to the left-channel(L)

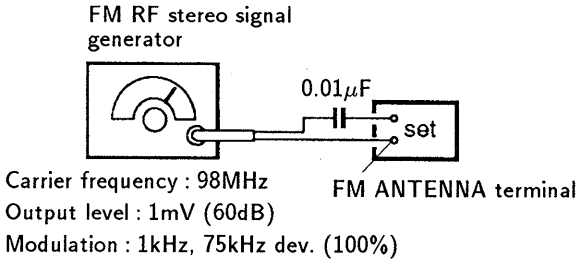


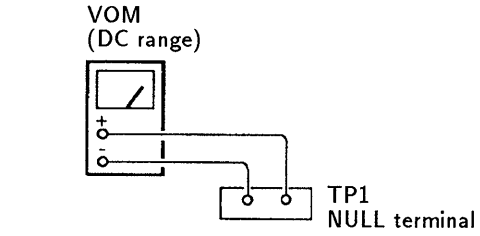
SECTION 2
ELECTRICAL ADJUSTMENTS

FM SECTION

• FM Discriminator (NULL) Adjustment

Setting :





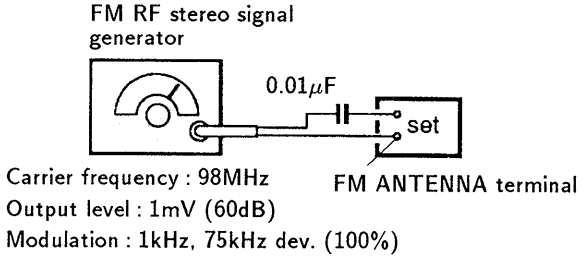
Procedure :

1. Tune the set to 98MHz.
2. Adjust T21 for a 0V reading on the VOM.

Note : FM Tuning Level adjustment should be made after FM discriminator adjustment.

FM Stereo Operation Level Adjustment

Setting :

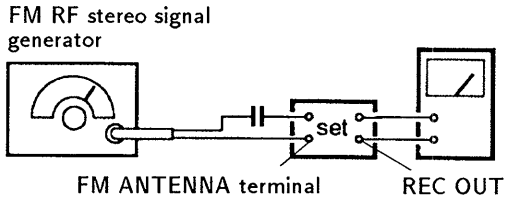


Procedure :

1. Tune the set to 98MHz.
2. Adjust RV24 so that the STEREO LED goes on.

• FM Stereo Separation Adjustment

Setting :



Procedure :

Tune the set to 98MHz.

FM stereo signal generator output channel	VTVM connection	VTVM reading (dB)
L-CH	L-CH	Ⓐ
R-CH	L-CH	Ⓑ Adjust RV21 for minimum reading.
R-CH	R-CH	Ⓒ
L-CH	R-CH	Ⓓ Adjust RV21 for minimum reading.

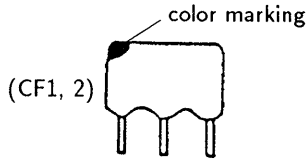
L-CH Stereo separation : Ⓐ - Ⓑ

R-CH Stereo separation : Ⓒ - Ⓓ

The separations of both channels should be equal.

Note on Ceramic Filter (CF1, 2) Replacement.

This set employs two ceramic filters (CF1, 2) which should have the same color marking to identify their center frequency. Therefore FM IF offset adjustment by (*A, *B) connection is necessary to match the center frequency of the ceramic filters used with FM intermediate frequency.



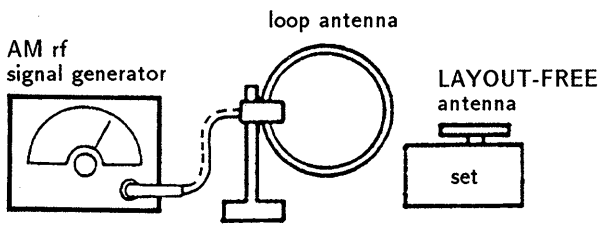
○ : connect
× : not connect

Ceramic filter		Connection		FM intermediate frequency (MHz)
Color mark	Center frequency (MHz)	*A	*B	
White	10,750	○	×	10,750
Red	10,700	×	×	10,700
Black	10,650	○	○	10,650

AM SECTION

• AM Meter Adjustment

Setting :



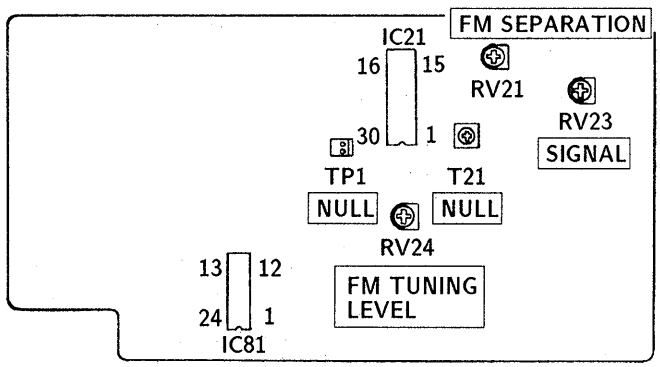
Carrier frequency : 1,050kHz
Modulation : 400Hz, 30% modulation

Procedure :

1. Set loop antenna so that the LAYOUT-FREE antenna input level becomes 0.2V (106dB)
2. Tune the set to 1,050kHz.
3. Adjust the RV23 so that the 8 point segment of the signal meter goes on.

Adjustment Location :

【TUNER BOARD】 (COMPONENT SIDE)



AMP SECTION

DC Bias Adjustment

• Perform this adjustment after replacement of power amp or drive circuit transistors.

setting :

VOLUME : 0
SPEAKERS : OFF (no load)

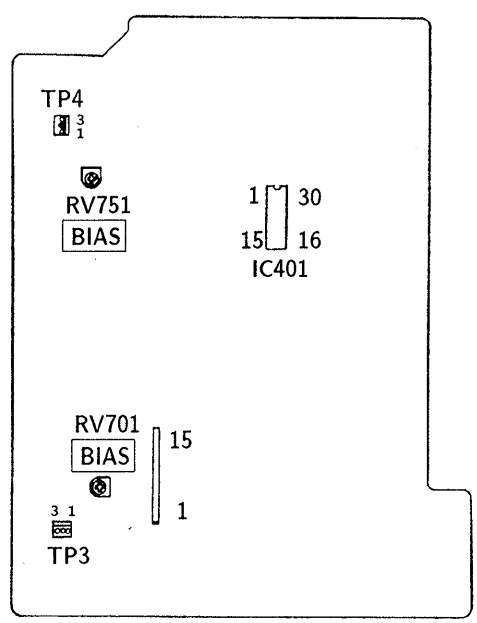
Procedures :

1. Connect the digital voltmeter to Bias Test Point (TP3 ①, ③ : L-CH, TP4 ①, ③ : R-CH)
2. Increase the AC power voltage gradually to 120V confirming that the voltmeter will not indicate an abnormal value.
3. Confirm that the display is normal.
4. Adjust RV701 (L-ch) or RV751 (R-ch) so that the reading on the voltmeter becomes 3.5mV within 30 seconds after the power turned on.

Note : It is normal that the voltage will increase as time passes.

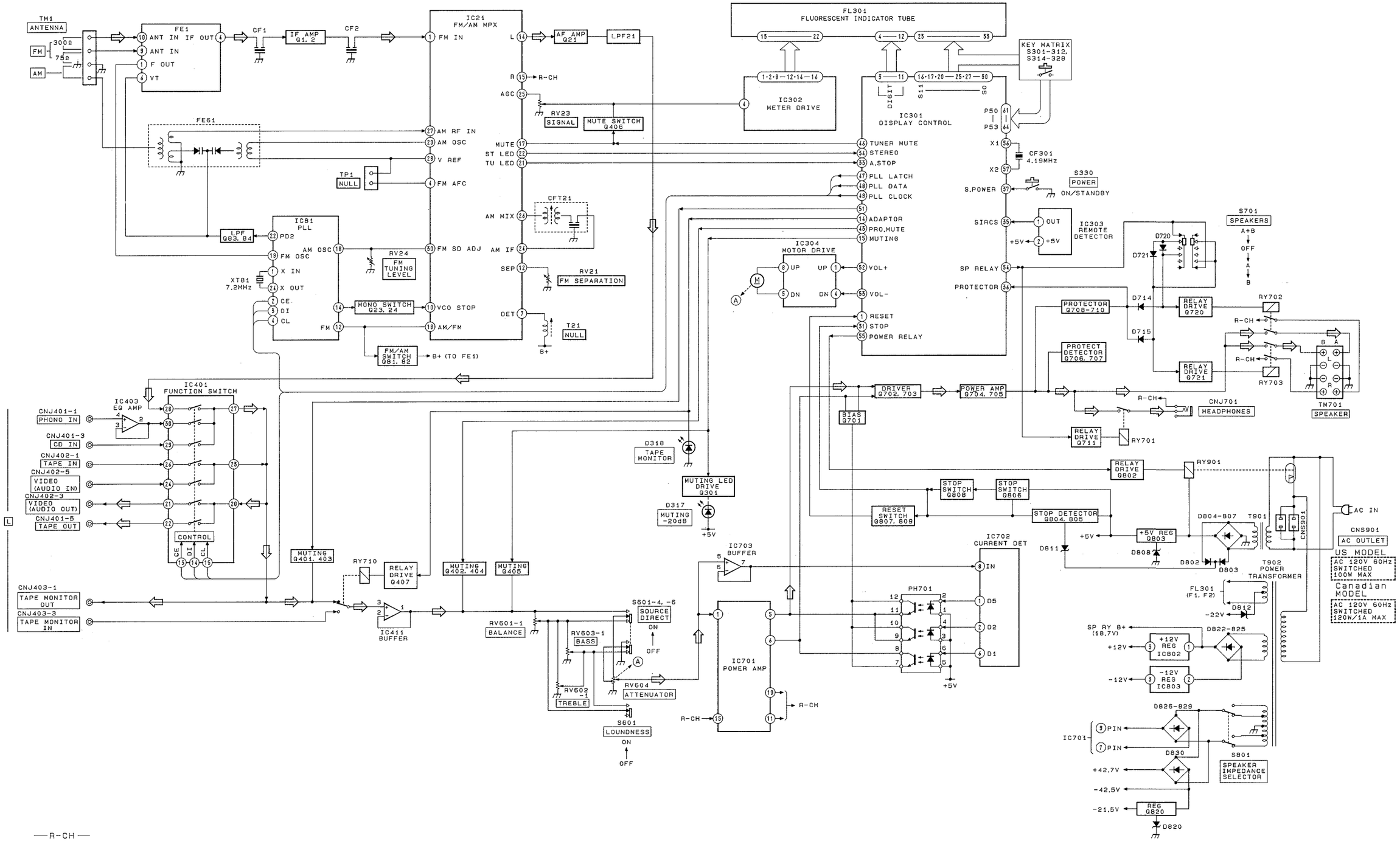
5. Turn the power off and remove the digital voltmeter.

【MAIN BOARD】 (COMPONENT SIDE)



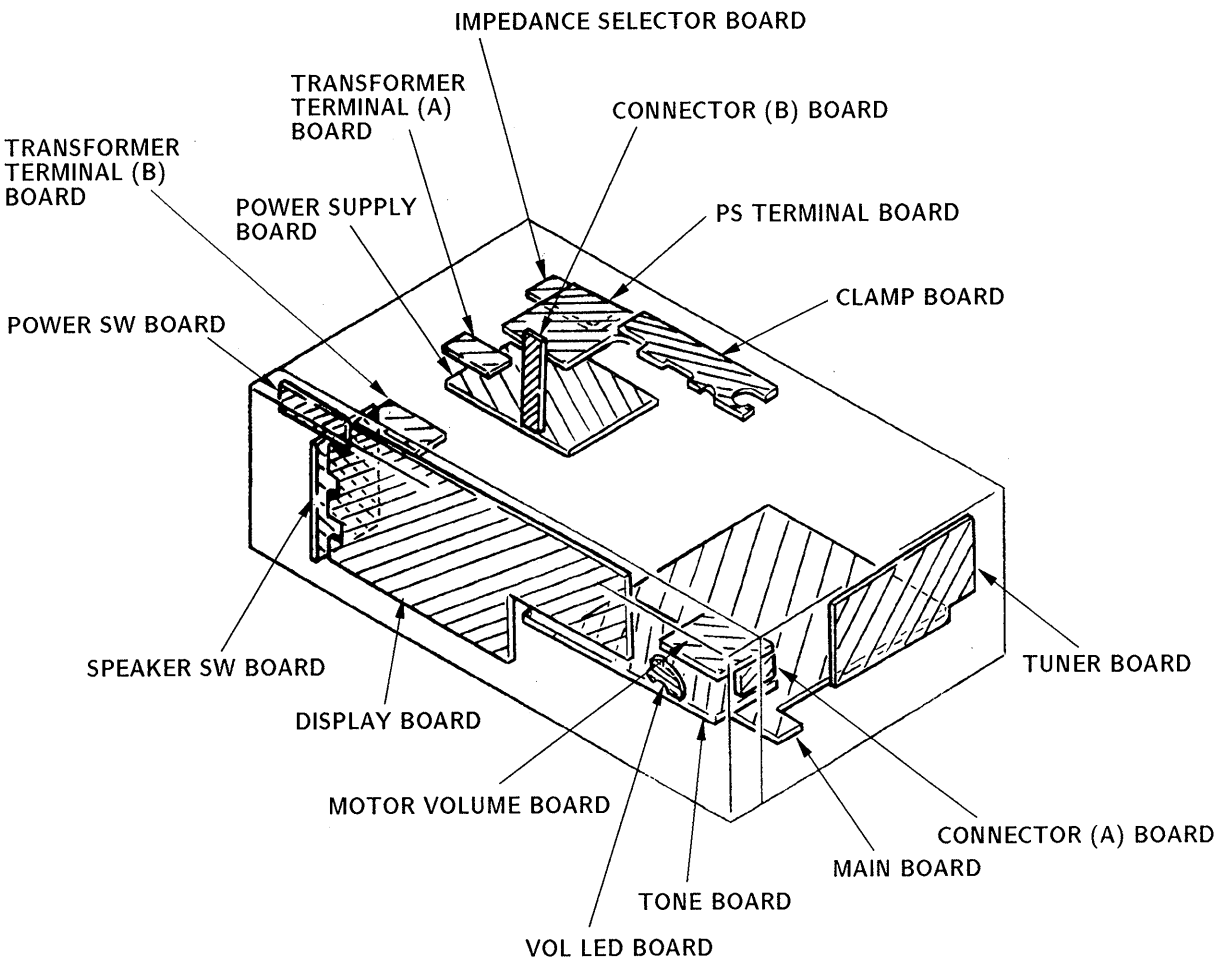
SECTION 3
DIAGRAMS

3-1. BLOCK DIAGRAM

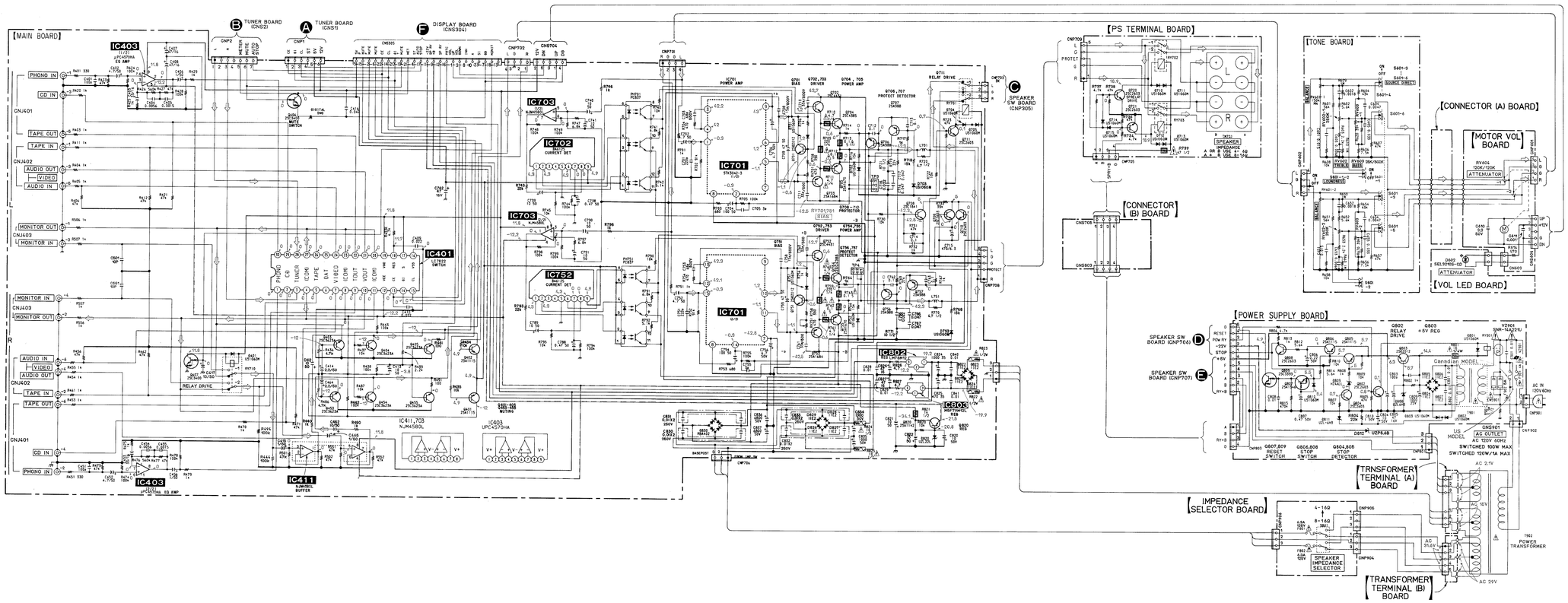


—R-CH—
SAME AS L-CH

- **Circuit Boards Lacation**



• See page 27, 28 for IC Block Diagram.



Note on Printed Wiring Board:

- ○—— : parts extracted from the component side.
- ■ : parts mounted on the conductor side.
- ▒▒▒ : Pattern on the side which is seen.

Note:

- All capacitors are in μF unless otherwise noted. pF: μμF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼ W or less unless otherwise specified.
- △ : internal component.
- ⚠ : nonflammable resistor.
- ⚠ : fusible resistor.

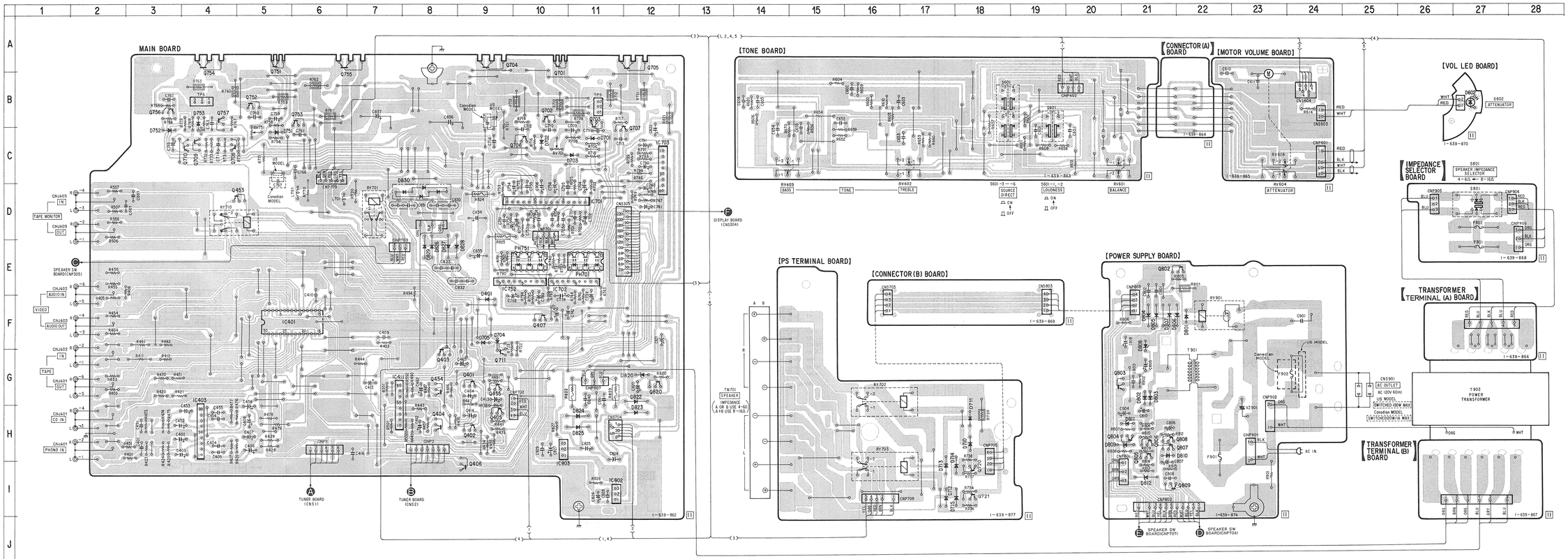
Note:	Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

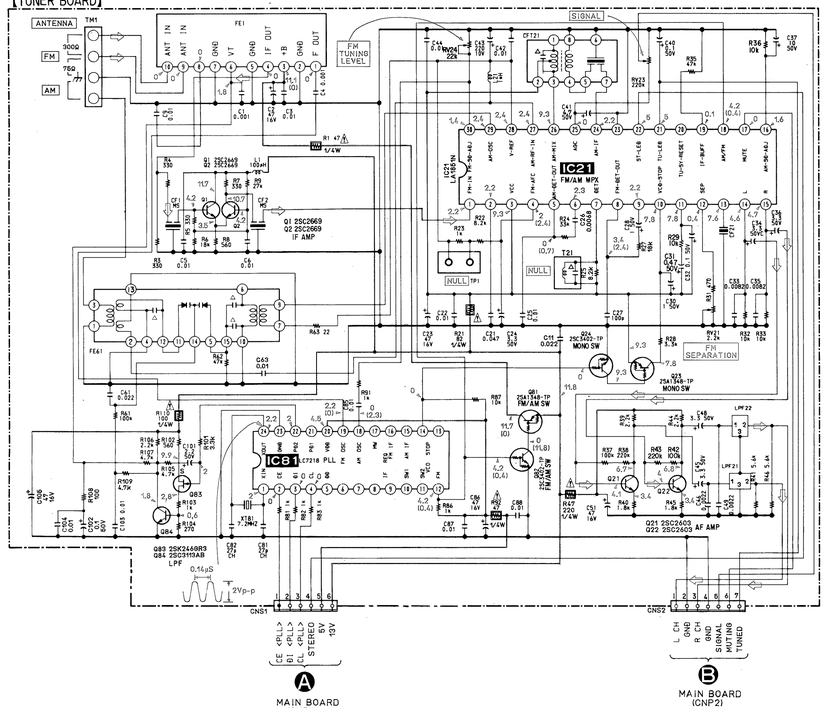
- ○ : B ÷ Line.
- ○ : B — Line.
- ○ : adjustment for repair.
- ○ Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark : FM
  ( ) : AM
- ○ Voltages are taken with a VOM (input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- ○ Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- ○ Signal path.
  ⇨ : FM

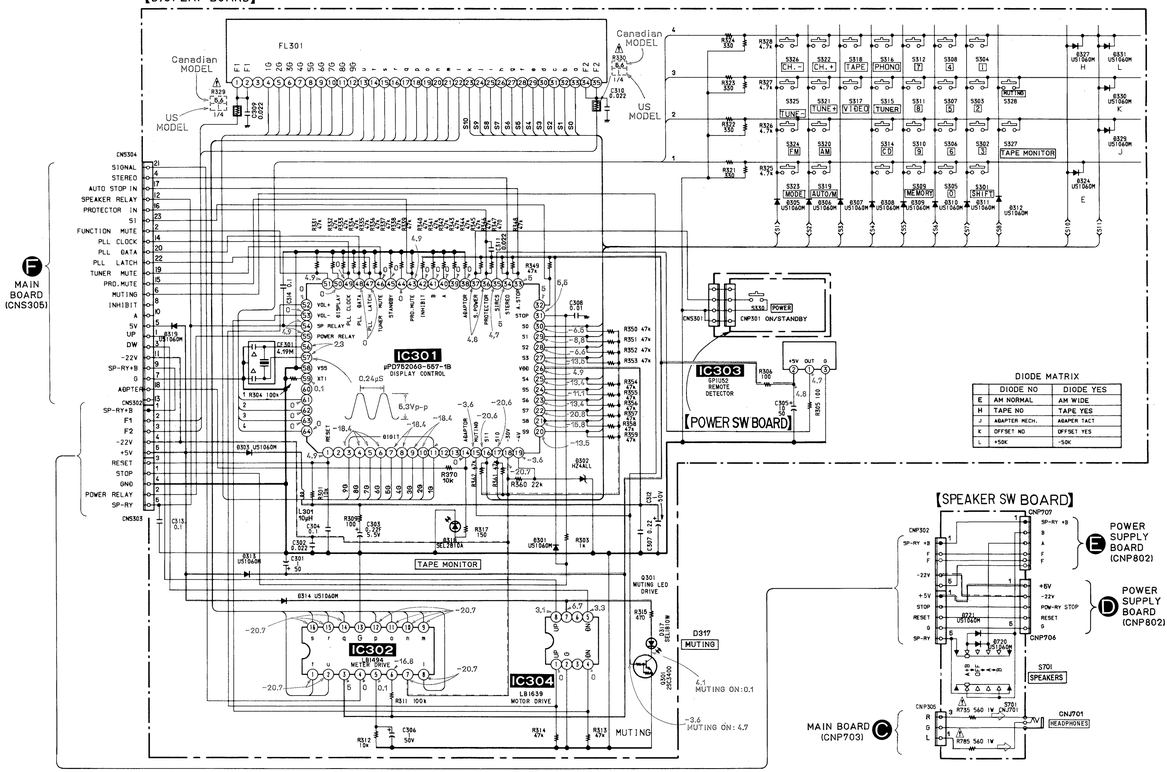
• See page 31 for Semiconductor Lead Layouts.

• Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D401	F-9	PH701	E-11
D602	B-27	PH751	E-10
D701	C-11		
D702	C-10	Q401	G-9
D703	C-11	Q402	H-9
D704	F-9	Q403	G-8
D705	F-9	Q404	H-8
D710	H-18	Q405	H-9
D711	H-18	Q406	I-9
D712	I-17	Q407	F-10
D713	I-17	Q453	D-5
D714	I-17	Q454	G-8
D715	I-17	Q455	G-9
D751	C-5	Q701	A-10
D752	C-3	Q702	B-10
D753	B-4	Q703	B-11
D801	F-22	Q704	A-9
D802	G-21	Q705	A-12
D803	G-21	Q706	C-10
D804	F-21	Q707	C-11
D805	F-21	Q708	C-4
D806	F-21	Q709	C-4
D807	F-21	Q710	C-4
D808	F-21	Q711	G-9
D809	H-21	Q720	I-18
D810	H-21	Q721	I-18
D811	H-21	Q751	A-5
D812	I-21	Q752	B-5
D820	G-12	Q753	B-6
D822	G-12	Q754	A-4
D823	H-12	Q755	A-6
D824	H-11	Q756	B-3
D825	H-11	Q757	B-4
D826	E-8	Q802	E-22
D827	E-8	Q803	G-21
D828	E-8	Q804	H-21
D829	E-8	Q805	H-21
D830	D-8	Q806	H-21
		Q807	H-21
IC401	F-5	Q808	H-21
IC403	H-4	Q809	I-21
IC411	G-7	Q820	G-12
IC701	D-10		
IC702	E-10		
IC703	C-12		
IC752	E-10		
IC802	I-11		
IC803	H-10		







DIODE MATRIX

DIODE NO	DIODE YES
E	AM NORMAL	AM WIDE
H	TAPE NO	TAPE YES
J	ADAPTER MECH.	ADAPTER TACT
K	OFFSET NO	OFFSET YES
L	+50C	-50C

Note:

- All capacitors are in μF unless otherwise noted. pF: μμF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼ W or less unless otherwise specified.
- △ : internal component.
- ⚠ : nonflammable resistor.
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- ▭ : B + line.
- ▭▭ : B − line.
- ▭ : adjustment for repair.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark : FM
  ( ) : AM
- Voltages are taken with a VOM (input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Signal path.
  ⇨ : FM

3-5. TUNER, DISPLAY SECTION PRINTED WIRING BOARDS

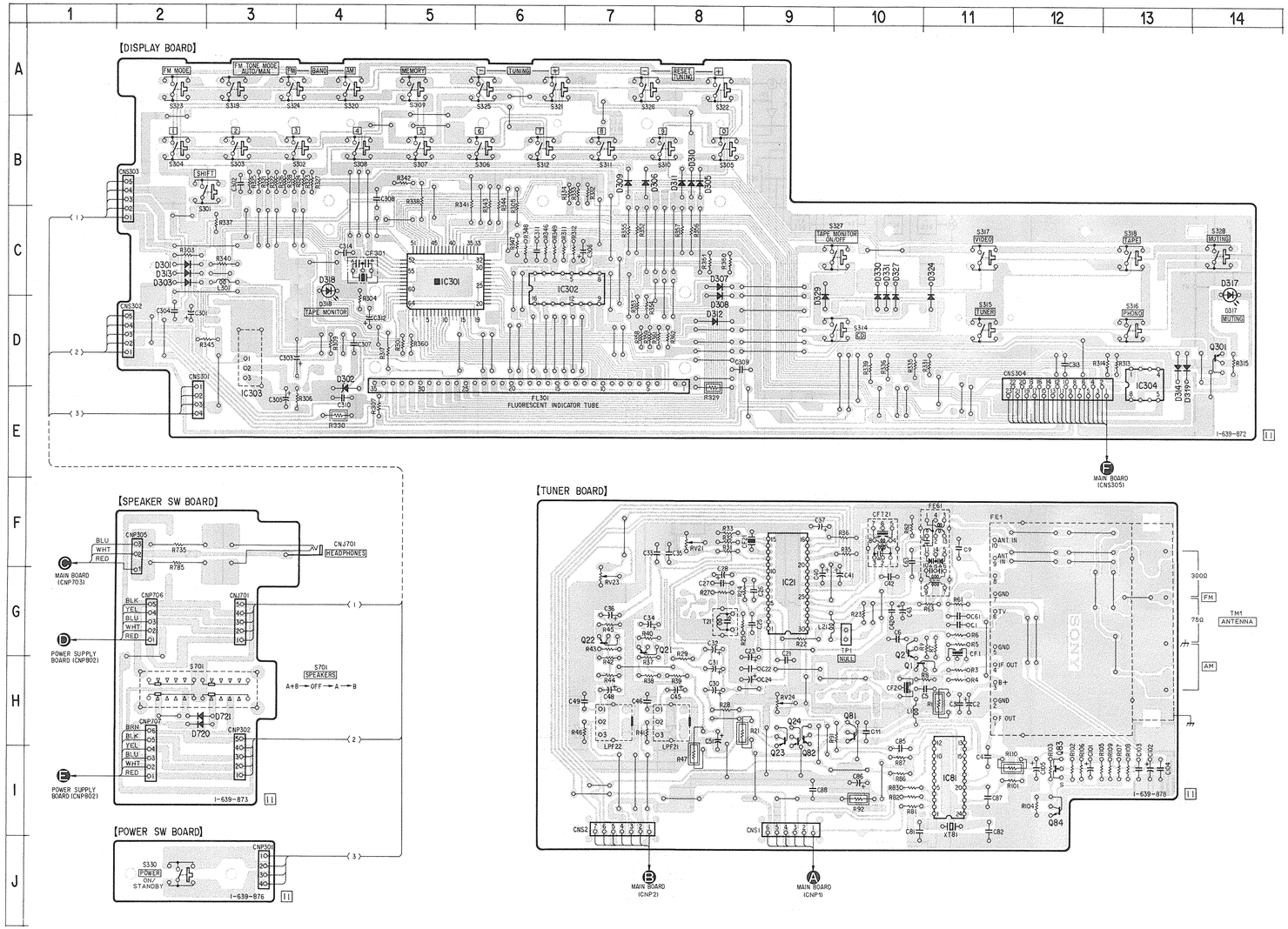
● See page 31 for Semiconductor Lead Layouts.

● **Semiconductor Location**

Ref. No.	Location
D301	C-2
D302	E-4
D303	C-2
D305	B-8
D306	B-7
D307	C-8
D308	C-8
D309	B-7
D310	B-8
D311	B-8
D312	D-8
D313	C-2
D314	D-13
D317	C-14
D318	C-14
D319	D-19
D324	C-11
D327	C-10
D329	C-9
D330	C-10
D331	C-10
D720	H-2
D721	H-2
IC21	G-9
IC301	C-5
IC302	C-7
IC303	D-3
IC304	D-13
IC81	I-11
Q1	H-11
Q2	G-10
Q21	G-7
Q22	G-7
Q23	H-9
Q24	H-9
Q81	H-10
Q82	H-9
Q83	I-12
Q84	I-12
Q301	D-14

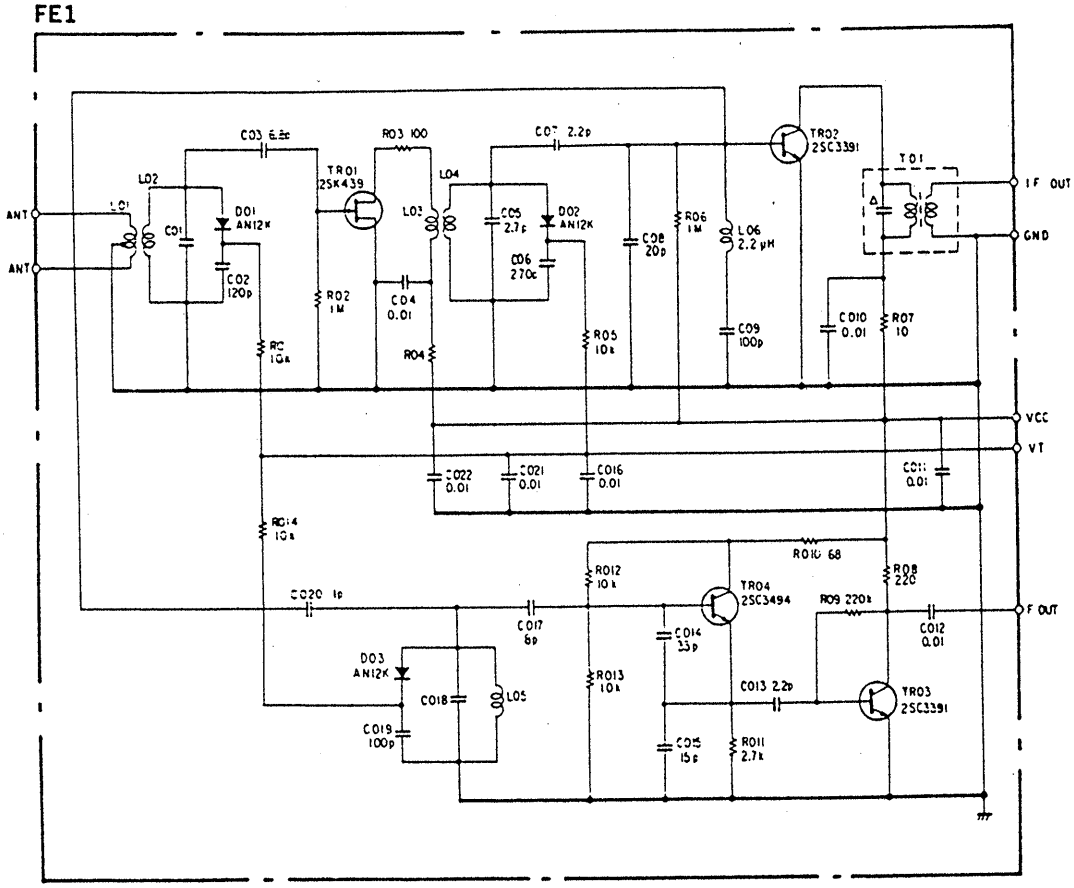
Note:

- ○——○ : parts extracted from the component side.
- ■ : parts mounted on the conductor side.
- ▒▒▒ : Pattern on the side which is seen.

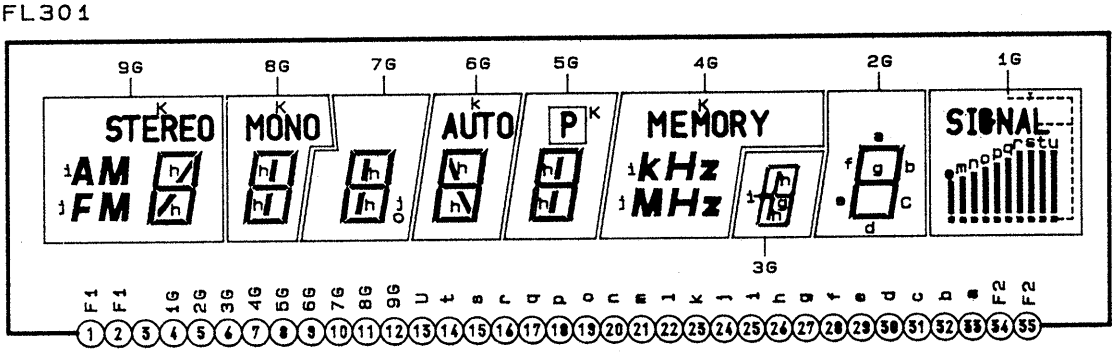


• FE1 (Front End) Schematic diagram

FE1

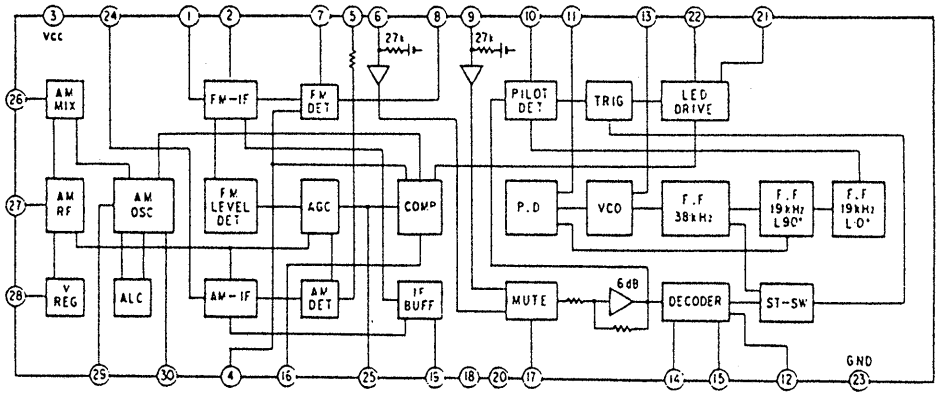


FL301

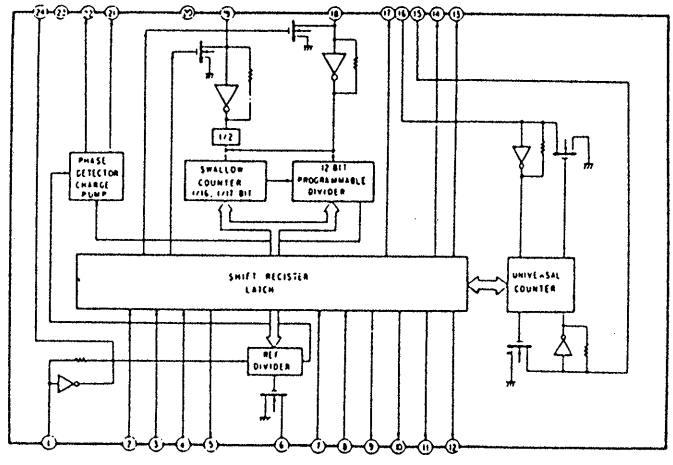


• IC Block Diagrams

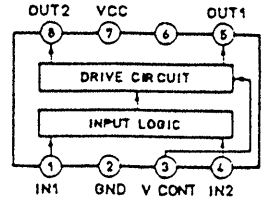
IC21 LA1851N



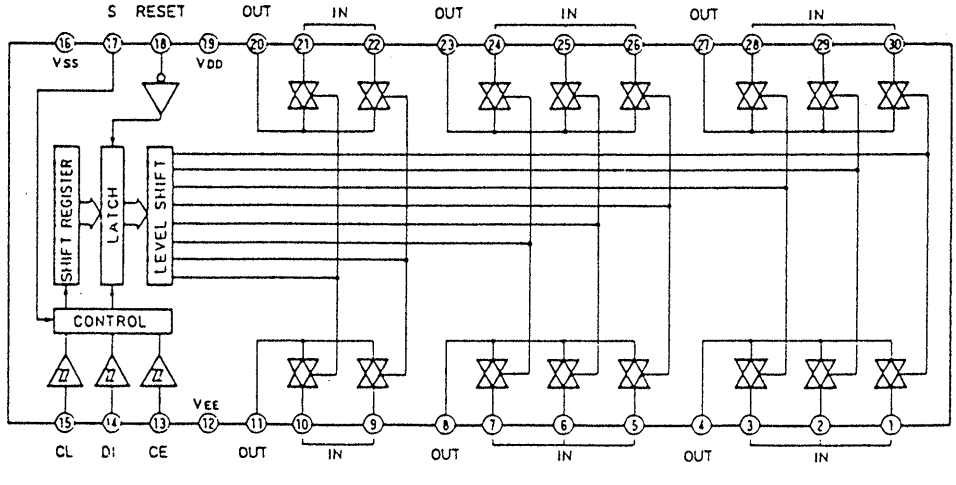
IC81 LC7218



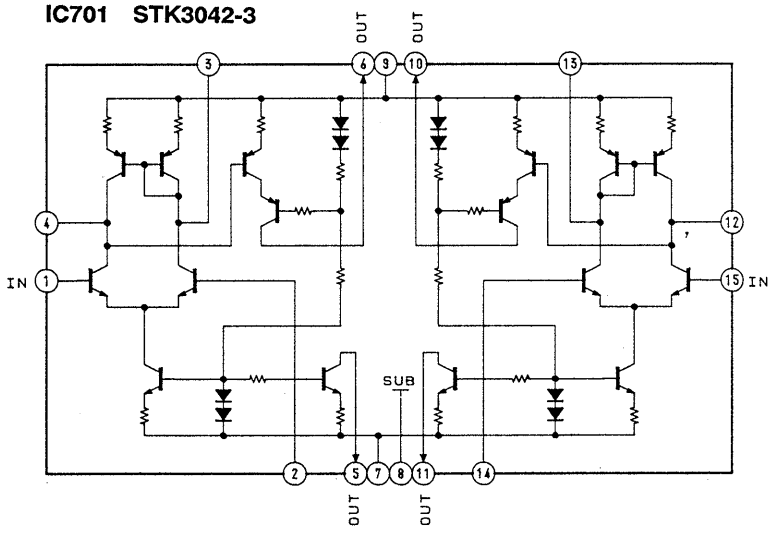
IC304 LB1639



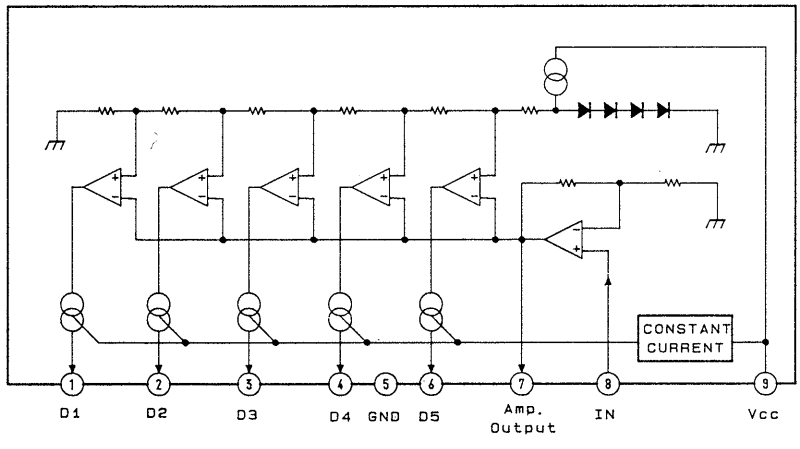
IC401 LC7822



IC701 STK3042-3



IC702, IC752 BA6125



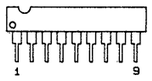
3-6. EXPLANATION OF IC301 (μPD75206)

PIN No.	SIGNAL NAME	FUNCTION	I/O	ACTIVE
1	RESET	Micro Computer RESET	I	L
2	T0	FL tube indication (invalid) digit	O	H
3	T1	FL tube indication digit T1	O	H
4	T2	FL tube indication digit T2	O	H
5	T3	FL tube indication digit T3	O	H
6	T4	FL tube indication digit T4	O	H
7	T5	FL tube indication digit T5	O	H
8	T6	FL tube indication digit T6	O	H
9	T7	FL tube indication digit T7	O	H
10	T8	FL tube indication digit T8	O	H
11	T9	FL tube SIGNAL indication digit T9	O	H
12	T10/PH3	DBFB Output	O	H
13	T11/PH2	IF WIDE/NARROW Output	O	H
14	T12/PH1	Adapter Output	O	H
15	T13/PH0	−20dB Muting Output	O	H
16	T14/S11	FL tube indication Segment/Diode S11	O	H
17	T15/S10	FL tube indication Segment/Diode S10	O	H
18	V road	FL tube pulldown power supply	−	−
19	V pre	FL tube driver power supply	−	−
20	S9	FL tube indication Segment/Diode S9	O	H
21	S8	FL tube indication Segment/Key Scan S8	O	H
22	S7	FL tube indication Segment/Key Scan S7	O	H
23	S6	FL tube indication Segment/Key Scan S6	O	H
24	S5	FL tube indication Segment/Key Scan S5	O	H
25	S4	FL tube indication Segment/Key Scan S4	O	H
26	Vdd	Micro Computer power supply	−	−
27	S3	FL tube indication Segment/Key Scan S3	O	H
28	S2	FL tube indication Segment/Key Scan S2	O	H
29	S1	FL tube indication Segment/Key Scan S1	O	H
30	S0	FL tube indication Segment/Key Scan S0	O	H
31	P00/INT4	Signal to cut power supply STOP	I	L
32	P01/SCK	Serial latch for electrical adjustment use Sl. LAT	I	L

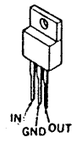
PIN No.	SIGNAL NAME	FUNCTION		I/O	ACTIVE
33	P02/S0	Tuner Auto Stop input	ASTP	I	L
34	P03/S1	Tuner Stereo input	STEREO	I	L
35	P10/INT0	Remote Control Signal input	SIRCS	I	L
36	P11/INT1	Protector input	PROTECT	I	L
37	P12/INT2	System Power Key input	PKEY	I	L
38	P13/TI0	Adapter Mechanical Switch input	AKEY	I	H
39	P20	Surround output	SURROUND	O	H
40	P21	Video Control A	VCRA	O	H
41	P22	Video Control B	VCRB	O	H
42	P23/BUZ	Video Inhibit	VCRI	O	H
43	P30	Protector Muting	PMUT	O	L
44	P31	Source Direct Output		O	H
45	P32	Standby LED Output	STANBY	O	H
46	P33	Tuner Muting	TMUTE	O	H
47	P60	PLL/7822 Latch	PLAT	O	H
48	P61	PLL/7822/SI Data	DATA	I/O	H
49	P62	PLL/7822/SI Clock	CLOK	I/O	H
50	P63	IF WIDE/NARROW Display output		O	H
51	P40	Function Muting	FMUTE	O	L
52	P41	Motor Volume UP	VOL+	O	H
53	P42	Motor Volume DOWN	VOL−	O	H
54	P43	Speaker Relay	SP. RY	O	H
55	PP0	Power Relay	POW. RY	O	H
56	X1	Ceramic Oscillator		−	−
57	X2	Ceramic Oscillator		−	−
58	Vss	Micro Computer GND		−	−
59	XT1	−		−	−
60	XT2	−		−	−
61	P50	P50	Key Scan Input	I	H
62	P51	P51	Key Scan Input	I	H
63	P52	P52	Key Scan Input	I	H
64	P53	P53	Key Scan Input	I	H

• Semiconductor Lead Layouts

BA6125



LM78M12



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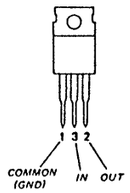

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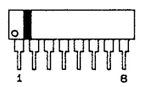
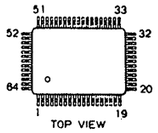


STK3042MK3

MARKING SIDE VIEW

UPC4570HA-1

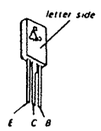
UPD75206G-557-1B



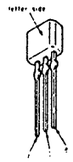
DTA114ES
DTA124ES
DTC114ES
DTC124ES
DTC144ES
2SC2603-EF
2SC2669-OY
2SC3113-AB
2SC3623A-LK

2SA988-PAFAEA
2SC1841-PAFAEA

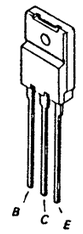
2SA1142-QPE



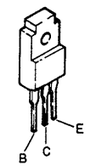
2SA1175-HFE
2SC2785-HFE



2SA1670-OY
2SC4385-OY
2SD2012



2SA1684-LK
2SC4431-LK



2SK246-GR3

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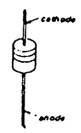
HZS22-2L
1SS120
11ES2



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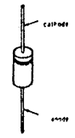
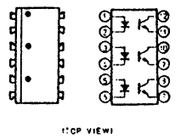
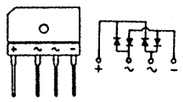


PC837



RBA-402



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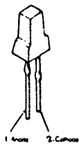
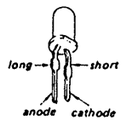
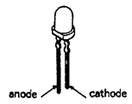


SEL2810A-C



SEL3210S-CD



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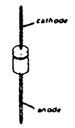


SECTION 4
EXPLODED VIEWS

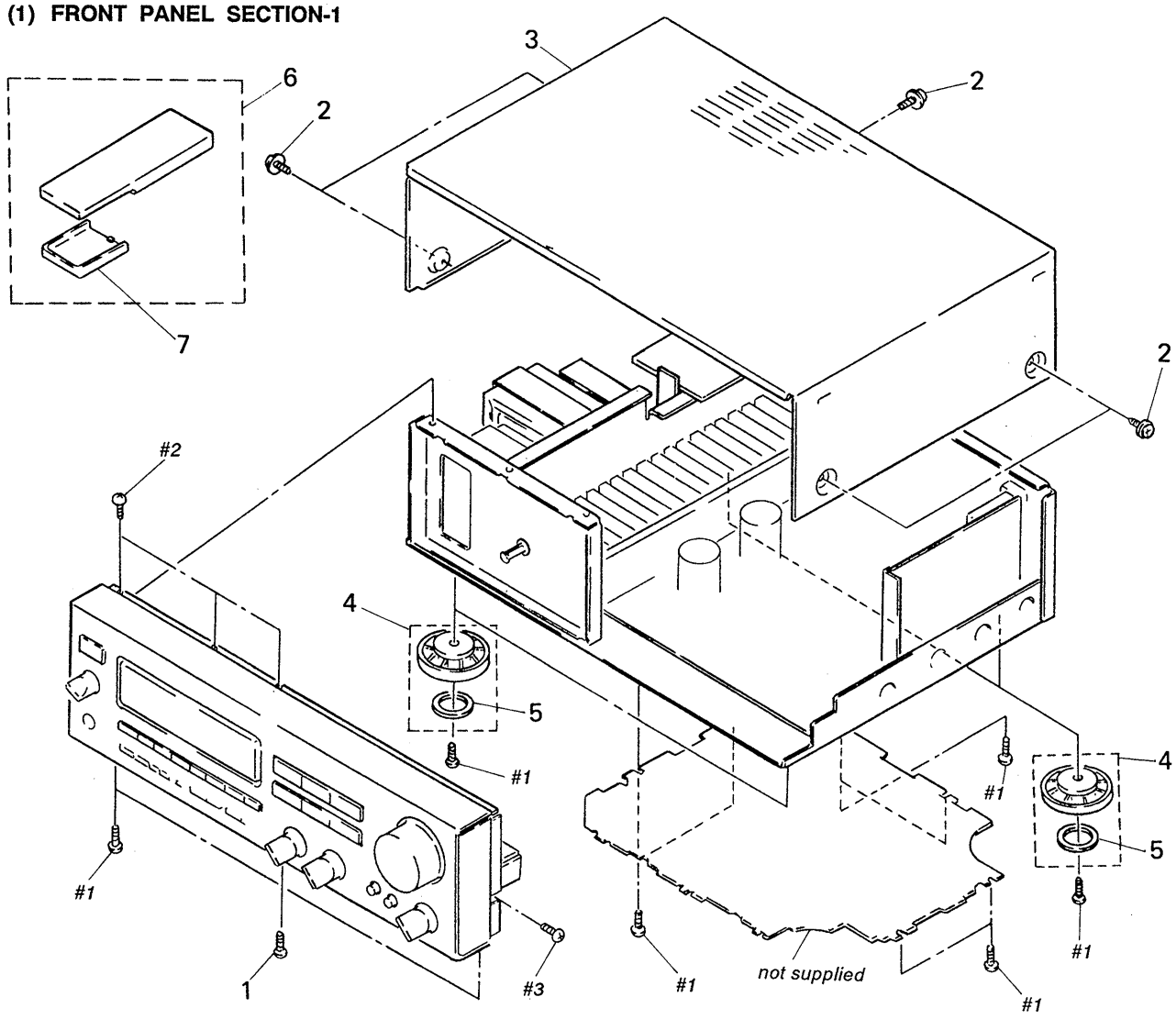
NOTE:

- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
  Example:
  KNOB, BALANCE (WHITE) . . . (RED)
  ↑ ↑
  Parts Color Cabinet's Color
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list is given in the last of this parts list.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

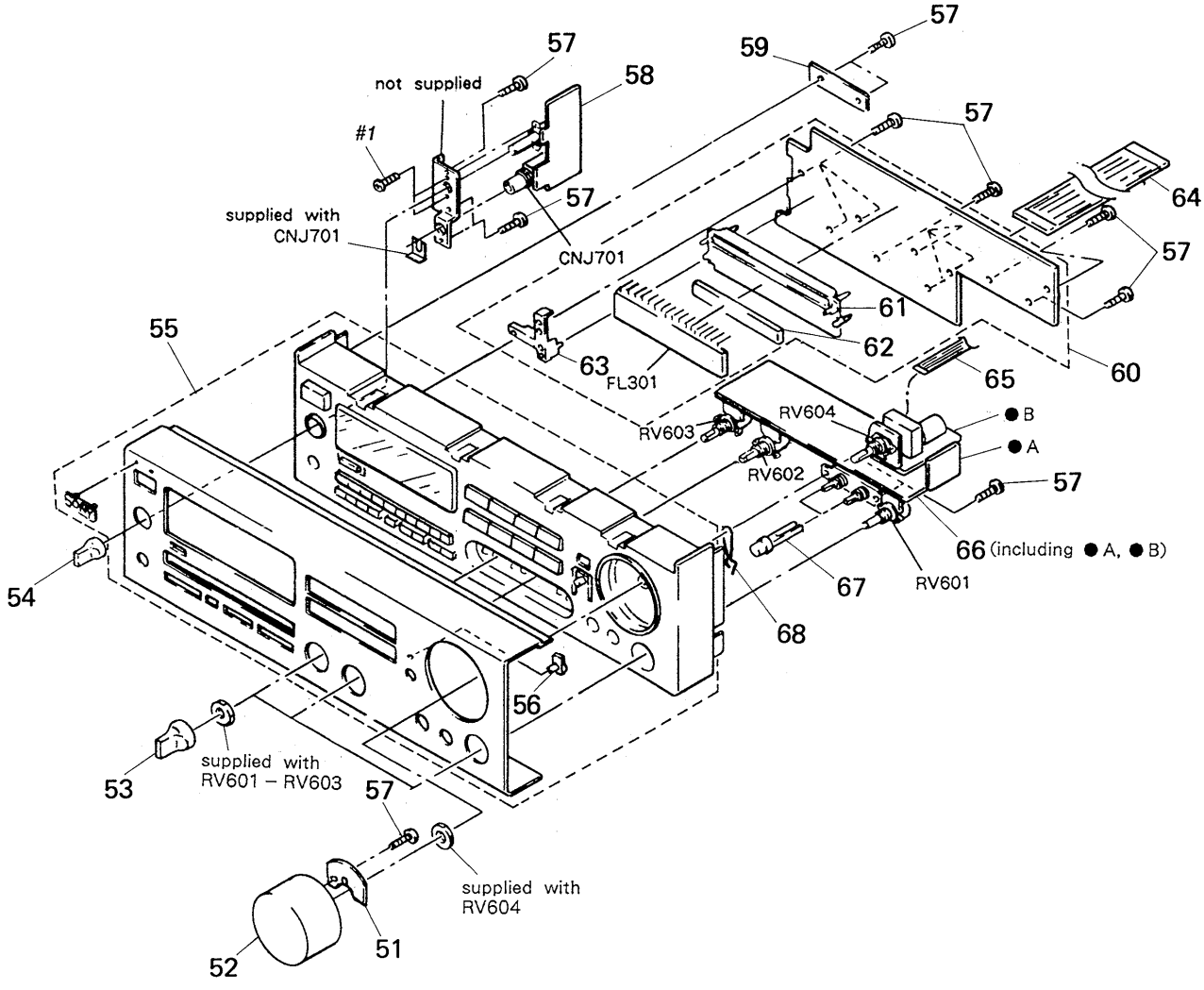
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le neméro spécifié.

(1) FRONT PANEL SECTION-1



Ref. No.	Part No.	Description	Remark
1	3-703-685-21	SCREW (+BV 3X8)	
2	3-704-366-01	SCREW (CASE) (M3X8)	
3	* 4-924-920-71	CASE	
4	X-3304-938-2	FOOT ASSY	
5	4-923-836-11	CUSHION	
6	1-465-423-11	REMOTE COMMANDER (RM-S103)	
7	2-181-754-01	COVER, BATTERY	

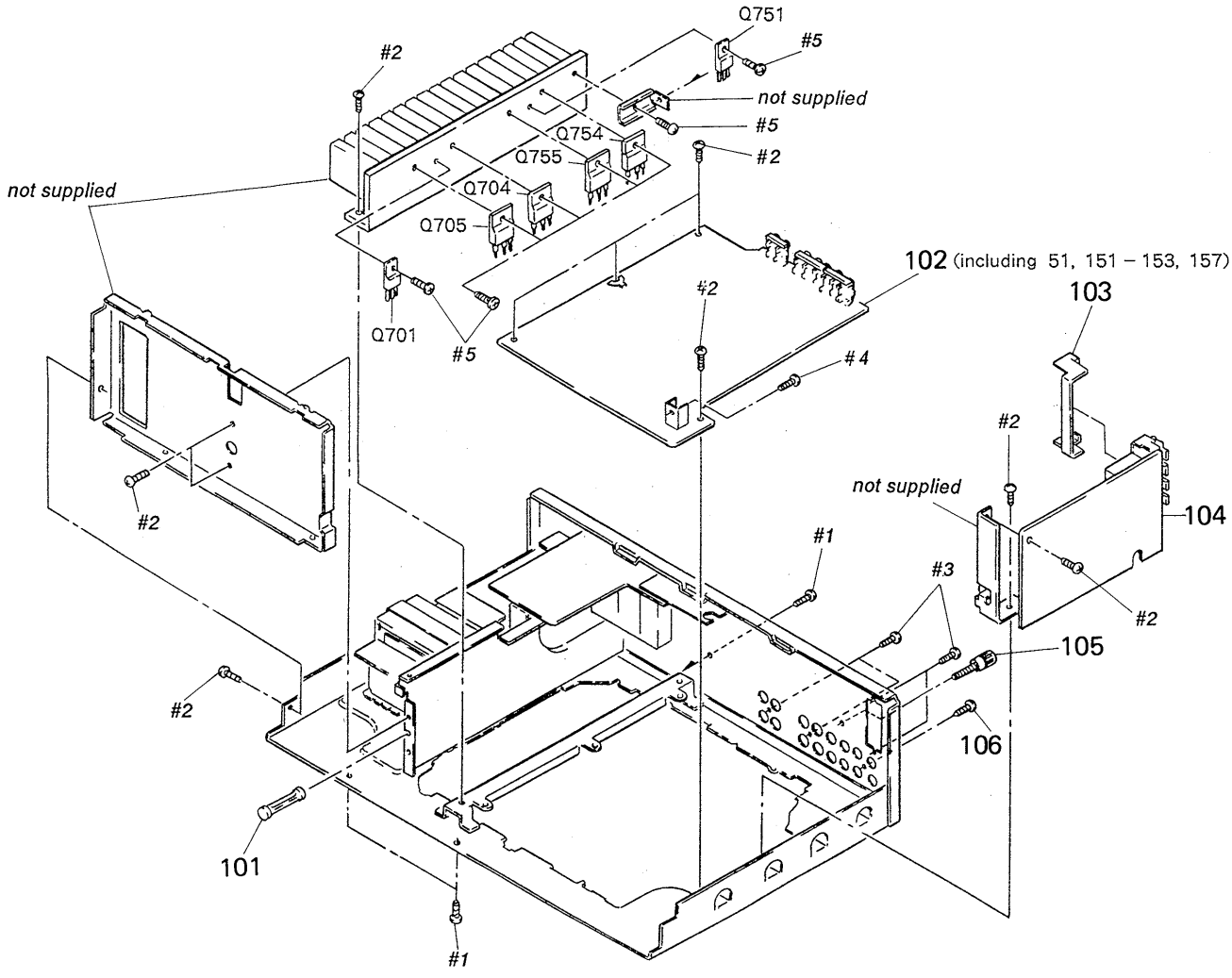
(2) FRONT PANEL SECTION-2



Ref. No.	Part No.	Description	Remark
51	* 1-639-870-11	VOL LED BOARD	
52	X-4941-651-1	KNOB (B) ASSY	
53	4-916-745-01	KNOB (DIA. 21)	
54	4-908-097-21	KNOB	
55	A-4323-979-A	PANEL ASSY, FRONT	
56	3-684-018-01	COVER, LAMP, REC	
57	4-928-635-01	SCREW, +BV (2.6X8) TAPPING	
58	* 1-639-873-11	SPEAKER SW BOARD	
59	* 1-639-876-11	POWER SW BOARD	
60	* A-4345-077-A	DISPLAY BOARD, COMPLETE (Canadian)	
60	A-4345-068-A	DISPLAY BOARD, COMPLETE (US)	

Ref. No.	Part No.	Description	Remark
61	* 4-923-103-01	HOLDER, FL TUBE	
62	* 4-921-941-41	CUSHION (FL)	
63	* 4-931-631-01	HOLDER, LED	
64	1-575-664-11	WIRE, FLAT TYPE (23 CORE)	
65	1-575-662-11	WIRE, FLAT TYPE (5 CORE)	
66	* A-4345-063-A	TONE BOARD, COMPLETE	
67	4-931-926-01	BUTTON (B)	
68	* 1-535-624-11	TERMINAL, PIN JACK	
FL301	1-519-590-11	INDICATOR TUBE, FLUORESCENT	

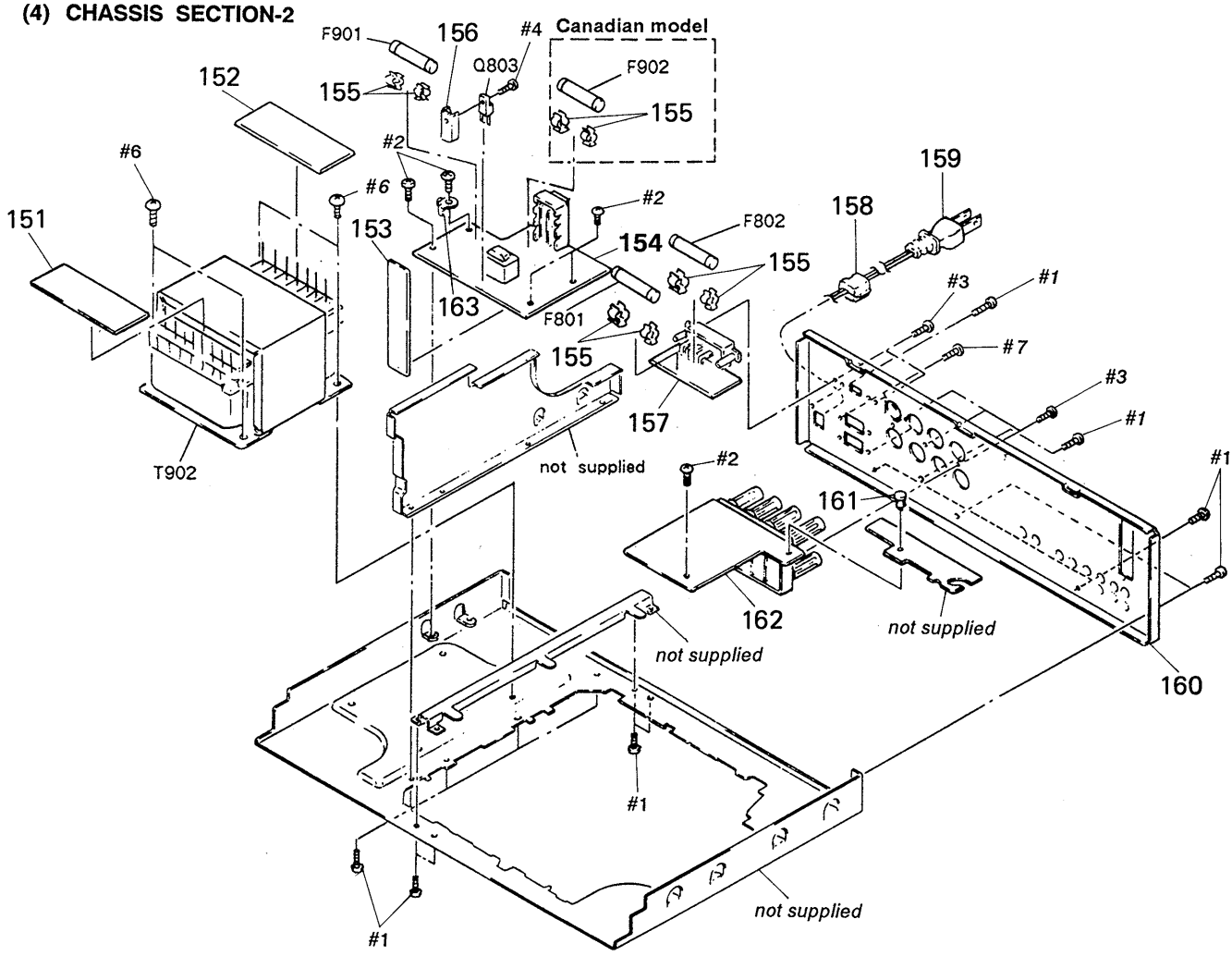
(3) CHASSIS SECTION-1



Ref. No.	Part No.	Description	Remark
101	* 3-687-542-11	SPACER, PC BOARD SPACE	
102	* A-4345-062-A	MAIN BOARD, COMPLETE (US)	
102	* A-4345-076-A	MAIN BOARD, COMPLETE (Canadian)	
103	* 4-924-988-11	PLATE (ST), GROUND	
104	* A-4345-074-A	TUNER BOARD, COMPLETE	
105	3-706-165-00	SCREW	
106	7-621-849-00	SCREW, TAPPING	

Ref. No.	Part No.	Description	Remark
Q701	8-729-209-15	TRANSISTOR 2SD2012	
Q704	8-729-321-30	TRANSISTOR 2SC4385-OY	
Q705	8-729-321-27	TRANSISTOR 2SA1670-OY	
Q751	8-729-209-15	TRANSISTOR 2SD2012	
Q754	8-729-321-30	TRANSISTOR 2SC4385-OY	
Q755	8-729-321-27	TRANSISTOR 2SA1670-OY	

(4) CHASSIS SECTION-2



Ref. No.	Part No.	Description	Remark
151	* 1-639-867-11	TRANSFORMER TERMINAL (B) BOARD	
152	* 1-639-866-11	TRANSFORMER TERMINAL (A) BOARD	
153	* 1-639-869-11	CONNECTOR (B) BOARD	
154	* A-4345-070-A	POWER SUPPLY BOARD, COMPLETE (US)	
154	* A-4345-078-A	POWER SUPPLY BOARD, COMPLETE (Canadian)	
155	* 1-533-225-11	HOLDER, FUSE	
156	* 3-309-144-21	HEAT SINK	
157	* 1-639-868-11	IMPEDANCE SELECTOR BOARD	
158	* 3-703-244-00	BUSHING (2104), CORD	
159	⚠ · 1-575-975-11	CORD, POWER	
160	* 4-944-550-01	PANEL, BACK (US)	
160	* 4-944-550-11	PANEL, BACK (Canadian)	
161	3-703-356-00	RIVET, T TYPE	
162	* 1-639-877-11	PS TERMINAL BOARD	
F801	⚠ · 1-532-748-11	FUSE, GLASS TUBE 6.3A 125V	
F802	⚠ · 1-532-748-11	FUSE, GLASS TUBE 6.3A 125V	
F901	⚠ · 1-532-746-11	FUSE, GLASS TUBE 4A 125V	
F902	⚠ · 1-532-747-11	FUSE, GLASS TUBE 5A 125V (Canadian)	
T902	⚠ · 1-449-970-11	TRANSFORMER, POWER (US)	
T902	⚠ · 1-450-188-11	TRANSFORMER, POWER (Canadian)	

Note:	Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le neméro spécifié.

SECTION 5
ELECTRICAL PARTS LIST

DISPLAY **SPEAKER SW** **POWER SW**

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL: Metal-film resistor
  METAL OXIDE: Metal Oxide-film resistor
  F: nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u: μ, for example:
  uA...: μA..., uPA...: μPA...,
  uPB...: μPB..., uPC...: μPC...,
  uPD...: μPD...
- CAPACITORS
  uF: μF
- COILS
  uH: μH

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le neméro spécifié.

When including parts by reference number, please include the board name.

Ref. No.	Part No.	Description			Remark
	* A-4345-068-A	DISPLAY BOARD, COMPLETE (US)			
	* A-4345-077-A	DISPLAY BOARD, COMPLETE (Canadian)			
		**********			
	* 1-639-873-11	SPEAKER SW BOARD			
		**********			
	* 1-639-876-11	POWER SW BOARD			
		**********			
	* 4-921-941-41	CUSHION (FL)			
	* 4-923-103-01	HOLDER, FL TUBE			
	4-931-631-01	HOLDER, LED			
		< CAPACITOR >			
C301	1-126-301-11	ELECT	1uF	20% 50V	
C302	1-164-097-11	CERAMIC	0.022uF	50V	
C303	1-125-486-11	DUBLE LAYERS	0.22F	5.5V	
C304	1-136-165-00	FILM	0.1uF	5% 50V	
C305	1-124-261-00	ELECT	10uF	20% 50V	
C306	1-126-301-11	ELECT	1uF	20% 50V	
C307	1-136-169-00	FILM	0.22uF	5% 50V	
C308	1-136-153-00	FILM	0.01uF	5% 50V	
C309	1-164-097-11	CERAMIC	0.022uF	50V	
C310	1-164-097-11	CERAMIC	0.022uF	50V	
C311	1-164-097-11	CERAMIC	0.022uF	50V	
C312	1-126-301-11	ELECT	1uF	20% 50V	
C313	1-164-159-11	CERAMIC	0.1uF	50V	
C314	1-164-159-11	CERAMIC	0.1uF	50V	
		< FILTER >			
CF301	1-577-101-11	VIBRATOR, CERAMIC (4.19MHz)			

Ref. No.	Part No.	Description	Remark
		< CONNECTOR >	
CNJ701	1-573-203-11	JACK, LARGE TYPE (HEADPHONES)	
CNP301	* 1-565-295-11	PLUG, CONNECTOR 4P	
CNP302	1-506-906-11	PIN, CONNECTOR 5P	
CNP303	1-506-906-11	PIN, CONNECTOR 5P	
CNP706	* 1-564-508-11	PLUG, CONNECTOR 5P	
CNP707	* 1-564-509-11	PLUG, CONNECTOR 6P	
CNS301	* 1-565-480-11	CONNECTOR, BOARD TO BOARD 4P	
CNS304	* 1-568-865-11	SOCKET, CONNECTOR 23P	
		< DIODE >	
D301	8-719-912-20	DIODE 1SS120	
D302	8-719-914-11	DIODE HZ4ALL	
D303	8-719-912-20	DIODE 1SS120	
D305	8-719-912-20	DIODE 1SS120	
D306	8-719-912-20	DIODE 1SS120	
D307	8-719-912-20	DIODE 1SS120	
D308	8-719-912-20	DIODE 1SS120	
D309	8-719-912-20	DIODE 1SS120	
D310	8-719-912-20	DIODE 1SS120	
D311	8-719-912-20	DIODE 1SS120	
D312	8-719-912-20	DIODE 1SS120	
D313	8-719-912-20	DIODE 1SS120	
D314	8-719-912-20	DIODE 1SS120	
D317	8-719-310-78	DIODE SEL1810W-C (MUTING)	
D318	8-719-301-52	DIODE SEL2810A-C (TAPE MONITOR)	
D319	8-719-912-20	DIODE 1SS120	
D324	8-719-912-20	DIODE 1SS120	
D327	8-719-912-20	DIODE 1SS120	
D329	8-719-912-20	DIODE 1SS120	
D330	8-719-912-20	DIODE 1SS120	

POWER SW

Ref. No.	Part No.	Description				Remark
D331	8-719-912-20	DIODE 1SS120				
D720	8-719-912-20	DIODE 1SS120				
D721	8-719-912-20	DIODE 1SS120				
		< FLUORESCENT INDICATOR >				
FL301	1-519-590-11	INDICATOR TUBE, FLUORESCENT				
		< IC >				
IC301	8-759-149-47	IC uPD75206G-557-1B				
IC302	8-759-801-57	IC LB1494				
IC303	8-749-920-83	IC GP1U52XB				
IC304	8-759-820-62	IC LB1639				
		< TRANSISTOR >				
Q301	8-729-900-36	TRANSISTOR DTC124ES				
		< RESISTOR >				
R301	1-249-429-11	CARBON	10K	5%	1/4W	
R303	1-249-417-11	CARBON	1K	5%	1/4W	
R304	1-249-441-11	CARBON	100K	5%	1/4W	
R305	1-249-405-11	CARBON	100	5%	1/4W	
R306	1-249-405-11	CARBON	100	5%	1/4W	
R309	1-249-405-11	CARBON	100	5%	1/4W	
R311	1-249-441-11	CARBON	100K	5%	1/4W	
R312	1-249-429-11	CARBON	10K	5%	1/4W	
R313	1-249-437-11	CARBON	47K	5%	1/4W	
R314	1-249-437-11	CARBON	47K	5%	1/4W	
R315	1-249-413-11	CARBON	470	5%	1/4W	
R317	1-249-407-11	CARBON	150	5%	1/4W	
R321	1-249-411-11	CARBON	330	5%	1/4W	
R322	1-249-411-11	CARBON	330	5%	1/4W	
R323	1-249-411-11	CARBON	330	5%	1/4W	
R324	1-249-411-11	CARBON	330	5%	1/4W	
R325	1-249-425-11	CARBON	4.7K	5%	1/4W	
R326	1-249-425-11	CARBON	4.7K	5%	1/4W	
R327	1-249-425-11	CARBON	4.7K	5%	1/4W	
R328	1-249-425-11	CARBON	4.7K	5%	1/4W	
R329 ⚠·	1-249-447-11	CARBON	1	5%	1/4W	(US)
R329 ⚠·	1-249-456-11	CARBON	5.6	5%	1/4W	(Canadian)
R330 ⚠·	1-249-447-11	CARBON	1	5%	1/4W	(US)
R330 ⚠·	1-249-456-11	CARBON	5.6	5%	1/4W	(Canadian)
R331	1-249-437-11	CARBON	47K	5%	1/4W	
R332	1-249-437-11	CARBON	47K	5%	1/4W	
R333	1-249-437-11	CARBON	47K	5%	1/4W	
R334	1-249-437-11	CARBON	47K	5%	1/4W	
R335	1-249-437-11	CARBON	47K	5%	1/4W	
R336	1-249-437-11	CARBON	47K	5%	1/4W	
R337	1-249-437-11	CARBON	47K	5%	1/4W	
R338	1-249-437-11	CARBON	47K	5%	1/4W	
R339	1-249-437-11	CARBON	47K	5%	1/4W	
R340	1-249-437-11	CARBON	47K	5%	1/4W	
R341	1-249-437-11	CARBON	47K	5%	1/4W	
R342	1-249-437-11	CARBON	47K	5%	1/4W	
R343	1-249-437-11	CARBON	47K	5%	1/4W	
R344	1-249-437-11	CARBON	47K	5%	1/4W	
R345	1-249-437-11	CARBON	47K	5%	1/4W	
R346	1-249-437-11	CARBON	47K	5%	1/4W	
R347	1-249-413-11	CARBON	470	5%	1/4W	
R348	1-249-437-11	CARBON	47K	5%	1/4W	
R349	1-249-437-11	CARBON	47K	5%	1/4W	
R350	1-249-437-11	CARBON	47K	5%	1/4W	
R351	1-249-437-11	CARBON	47K	5%	1/4W	
R352	1-249-437-11	CARBON	47K	5%	1/4W	
R353	1-249-437-11	CARBON	47K	5%	1/4W	
R354	1-249-437-11	CARBON	47K	5%	1/4W	
R355	1-249-437-11	CARBON	47K	5%	1/4W	
R356	1-249-437-11	CARBON	47K	5%	1/4W	
R357	1-249-437-11	CARBON	47K	5%	1/4W	
R358	1-249-437-11	CARBON	47K	5%	1/4W	
R359	1-249-437-11	CARBON	47K	5%	1/4W	
R360	1-249-433-11	CARBON	22K	5%	1/4W	
R361	1-249-437-11	CARBON	47K	5%	1/4W	
R362	1-249-437-11	CARBON	47K	5%	1/4W	
R370	1-249-429-11	CARBON	10K	5%	1/4W	
R735 ⚠·	1-216-431-11	METAL OXIDE	560	5%	1W	F
R785 ⚠·	1-216-431-11	METAL OXIDE	560	5%	1W	F
		< SWITCH >				
S301	1-554-303-21	SWITCH, TACTILE (SHIFT)				
S302	1-554-303-21	SWITCH, TACTILE (3)				
S303	1-554-303-21	SWITCH, TACTILE (2)				
S304	1-554-303-21	SWITCH, TACTILE (1)				
S305	1-554-303-21	SWITCH, TACTILE (0)				
S306	1-554-303-21	SWITCH, TACTILE (6)				
S307	1-554-303-21	SWITCH, TACTILE (5)				
S308	1-554-303-21	SWITCH, TACTILE (4)				
S309	1-554-303-21	SWITCH, TACTILE (MEMORY)				
S310	1-554-303-21	SWITCH, TACTILE (9)				
S311	1-554-303-21	SWITCH, TACTILE (8)				
S312	1-554-303-21	SWITCH, TACTILE (7)				
S314	1-554-303-21	SWITCH, TACTILE (CD)				
S315	1-554-303-21	SWITCH, TACTILE (TUNER)				
S316	1-554-303-21	SWITCH, TACTILE (PHONO)				

Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Note:
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le neméro spécifié.

POWER SW | MAIN | TRANSFORMER TERMINAL | IMPEDANCE SELECTOR | CONNECTOR (B) | VOL LED

Ref. No.	Part No.	Description	Remark
S317	1-554-303-21	SWITCH, TACTILE (VIDEO)	
S318	1-554-303-21	SWITCH, TACTILE (TAPE)	
S319	1-554-303-21	SWITCH, TACTILE (FM TONE MODE)	
S320	1-554-303-21	SWITCH, TACTILE (AM)	
S321	1-554-303-21	SWITCH, TACTILE (TUNING +)	
S322	1-554-303-21	SWITCH, TACTILE (RESET TUNING +)	
S323	1-554-303-21	SWITCH, TACTILE (FM MODE)	
S324	1-554-303-21	SWITCH, TACTILE (FM)	
S325	1-554-303-21	SWITCH, TACTILE (TUNING -)	
S326	1-554-303-21	SWITCH, TACTILE (RESET TUNING -)	
S327	1-554-303-21	SWITCH, TACTILE (TAPE MONITOR)	
S328	1-554-303-21	SWITCH, TACTILE (MUTING)	
S330	1-554-303-21	SWITCH, TACTILE (POWER)	
S701	1-571-973-11	SWITCH, ROTARY (SPEAKERS)	
**********			
* A-4345-062-A		MAIN BOARD, COMPLETE (US)	
* A-4345-076-A		MAIN BOARD, COMPLETE (Canadian)	
		**********	
* 1-639-866-11		TRANSFORMER TERMINAL BOARD	
		**********	
* 1-639-867-11		TRANSFORMER TERMINAL BOARD	
		**********	
* 1-639-868-11		IMPEDANCE SELECTOR BOARD	
		**********	
* 1-639-869-11		CONNECTOR (B) BOARD	
		**********	
* 1-639-870-11		VOL LED BOARD	
		**********	
1-533-225-11		HOLDER, FUSE	
1-533-225-11		HOLDER, FUSE	
* 1-560-061-00		PIN, CONNECTOR 3P	
* 3-309-144-21		HEAT SINK	
* 4-904-446-01		PLATE, GROUND	
7-682-547-04		SCREW +BVTT 3X6 (S)	
		< CAPACITOR >	
C401	1-162-282-31	CERAMIC 100PF 10% 50V	
C402	1-126-163-11	ELECT 4.7uF 20% 50V	
C403	1-124-034-51	ELECT 33uF 20% 16V	
C404	1-130-480-00	MYLAR 0.0056uF 5% 50V	
C405	1-106-347-00	MYLAR 1500PF 5% 200V	
C406	1-126-301-11	ELECT 1uF 20% 50V	
C407	1-124-589-11	ELECT 47uF 20% 16V	
C408	1-124-589-11	ELECT 47uF 20% 16V	
C409	1-164-097-11	CERAMIC 0.022uF 50V	
C410	1-164-097-11	CERAMIC 0.022uF 50V	
C412	1-124-907-11	ELECT 10uF 20% 50V	
C413	1-124-907-11	ELECT 10uF 20% 50V	
C414	1-124-925-11	ELECT 2.2uF 20% 100V	
C415	1-126-301-11	ELECT 1uF 20% 50V	
C416	1-164-098-11	CERAMIC 0.047uF 12V	
C417	1-124-907-11	ELECT 10uF 20% 50V	
C451	1-162-282-31	CERAMIC 100PF 10% 50V	
C452	1-126-163-11	ELECT 4.7uF 20% 50V	
C453	1-124-034-51	ELECT 33uF 20% 16V	
C454	1-130-480-00	MYLAR 0.0056uF 5% 50V	
C455	1-106-347-00	MYLAR 1500PF 5% 200V	
C456	1-126-301-11	ELECT 1uF 20% 50V	
C462	1-124-907-11	ELECT 10uF 20% 50V	
C464	1-124-925-11	ELECT 2.2uF 20% 100V	
C465	1-126-301-11	ELECT 1uF 20% 50V	
C501	1-162-199-31	CERAMIC 10PF 5% 50V	
C551	1-162-199-31	CERAMIC 10PF 5% 50V	
C701	1-164-077-11	CERAMIC 220PF 10% 50V	
C702	1-124-927-11	ELECT 4.7uF 20% 100V	
C703	1-102-989-00	CERAMIC 68PF 5% 500V	
C704	1-124-122-11	ELECT 100uF 20% 50V	
C705	1-164-039-11	CERAMIC 3PF 0.25PF 50V	
C706	1-124-927-11	ELECT 4.7uF 20% 100V	
C708	1-102-316-00	CERAMIC 15PF 5% 500V	
C709	1-124-910-11	ELECT 47uF 20% 50V	
C710	1-102-233-00	CERAMIC 33PF 10% 500V	
C711	1-102-233-00	CERAMIC 33PF 10% 500V	
C712	1-136-165-00	FILM 0.1uF 5% 50V	
C713	1-136-165-00	FILM 0.1uF 5% 50V	
C714	1-136-165-00	FILM 0.1uF 5% 50V	
C715	1-124-472-11	ELECT 470uF 20% 10V	
C716	1-136-157-00	FILM 0.022uF 5% 50V (US)	
C716	1-136-161-00	FILM 0.047uF 5% 50V (Canadian)	
C717	1-136-161-00	FILM 0.047uF 5% 50V (Canadian)	
C738	1-124-902-00	ELECT 0.47uF 20% 50V	
C739	1-124-907-11	ELECT 10uF 20% 50V	
C740	1-124-907-11	ELECT 10uF 20% 50V	
C741	1-124-907-11	ELECT 10uF 20% 50V	
C742	1-124-477-11	ELECT 47uF 20% 25V	
C751	1-164-077-11	CERAMIC 220PF 10% 50V	
C752	1-124-927-11	ELECT 4.7uF 20% 100V	
C753	1-102-989-00	CERAMIC 68PF 5% 500V	
C754	1-124-122-11	ELECT 100uF 20% 50V	
C755	1-164-039-11	CERAMIC 3PF 0.25PF 50V	
C756	1-124-927-11	ELECT 4.7uF 20% 100V	
C758	1-102-316-00	CERAMIC 15PF 5% 500V	
C759	1-124-910-11	ELECT 47uF 20% 50V	
C760	1-102-233-00	CERAMIC 33PF 10% 500V	
C761	1-102-233-00	CERAMIC 33PF 10% 500V	
C762	1-136-165-00	FILM 0.1uF 5% 50V	
C763	1-136-165-00	FILM 0.1uF 5% 50V	

MAIN | TRANSFORMER TERMINAL | IMPEDANCE SELECTOR | CONNECTOR (B) | VOL LED

Ref. No.	Part No.	Description	Remark
C766	1-136-157-00	FILM 0.022uF 5% 50V (US)	
C766	1-136-161-00	FILM 0.047uF 5% 50V (Canadian)	
C767	1-136-161-00	FILM 0.047uF 5% 50V (Canadian)	
C788	1-124-902-00	ELECT 0.47uF 20% 50V	
C789	1-124-907-11	ELECT 10uF 20% 50V	
C790	1-124-907-11	ELECT 10uF 20% 50V	
C791	1-124-907-11	ELECT 10uF 20% 50V	
C820	1-124-907-11	ELECT 10uF 20% 50V	
C821	1-124-907-11	ELECT 10uF 20% 50V	
C822	1-124-907-11	ELECT 10uF 20% 50V	
C824	1-126-105-11	ELECT 1000uF 20% 35V	
C825	1-126-104-11	ELECT 470uF 20% 35V	
C826	1-124-477-11	ELECT 47uF 20% 25V	
C827	1-124-477-11	ELECT 47uF 20% 25V	
C828	1-161-379-00	CERAMIC 0.01uF 20% 25V	
C829	1-161-379-00	CERAMIC 0.01uF 20% 25V	
C830	1-102-394-11	CERAMIC 0.01uF 250V	
C831	1-102-394-11	CERAMIC 0.01uF 250V	
C832	1-102-394-11	CERAMIC 0.01uF 250V	
C833	1-102-394-11	CERAMIC 0.01uF 250V	
C834	1-124-637-11	ELECT 1000uF 20% 50V	
C835	1-124-637-11	ELECT 1000uF 20% 50V	
C836	1-125-614-11	ELECT 6800uF 20% 50V	
C837	1-125-614-11	ELECT 6800uF 20% 50V	
C840	1-164-096-11	CERAMIC 0.01uF 50V	
C841	1-164-096-11	CERAMIC 0.01uF 50V	
		< CONNECTOR >	
CNJ401	1-565-320-11	JACK, PIN 6P (TAPE OUT, CD IN, PHOHO IN)	
CNJ402	1-565-320-11	JACK, PIN 6P (TAPE IN, VIDEO AUDIO IN/OUT)	
CNJ403	1-565-258-11	JACK, PIN 4P (TAPE MONITOR IN/OUT)	
CNP1	* 1-569-501-11	PIN, CONNECTOR 6P	
CNP2	* 1-569-502-11	PIN, CONNECTOR 7P	
CNP701	* 1-564-507-11	PLUG, CONNECTOR 4P	
CNP702	* 1-564-507-11	PLUG, CONNECTOR 4P	
CNP703	* 1-564-506-11	PLUG, CONNECTOR 3P	
CNP706	* 1-535-116-00	TERMINAL	
CNP708	* 1-560-063-00	PIN, CONNECTOR 5P	
CNP906	* 1-564-104-00	PIN, CONNECTOR 3P	
CNP907	* 1-564-104-00	PIN, CONNECTOR 3P	
CNS305	* 1-568-839-11	SOCKET, CONNECTOR 23P	
CNS704	* 1-568-824-11	SOCKET, CONNECTOR 5P	
CNS705	* 1-569-397-11	SOCKET, CONNECTOR 4P	
CNS803	* 1-569-397-11	SOCKET, CONNECTOR 4P	

Ref. No.	Part No.	Description	Remark
		< DIODE >	
D401	8-719-912-20	DIODE 1SS120	
D602	8-719-313-69	DIODE SEL3210S-CD (ATTENUATOR)	
D701	8-719-912-20	DIODE 1SS120	
D702	8-719-912-20	DIODE 1SS120	
D703	8-719-912-20	DIODE 1SS120	
D704	8-719-912-20	DIODE 1SS120	
D705	8-719-912-20	DIODE 1SS120	
D751	8-719-912-20	DIODE 1SS120	
D752	8-719-912-20	DIODE 1SS120	
D753	8-719-912-20	DIODE 1SS120	
D820	8-719-934-00	DIODE HZS22-2L	
D822	8-719-200-82	DIODE 11ES2	
D823	8-719-200-82	DIODE 11ES2	
D824	8-719-200-82	DIODE 11ES2	
D825	8-719-200-82	DIODE 11ES2	
D826	8-719-200-82	DIODE 11ES2	
D827	8-719-200-82	DIODE 11ES2	
D828	8-719-200-82	DIODE 11ES2	
D829	8-719-200-82	DIODE 11ES2	
D830	8-719-312-09	DIODE RBA-402	
		< IC >	
IC401	8-759-805-14	IC LC7822	
IC403	8-759-112-93	IC uPC4570HA-1	
IC411	8-759-710-73	IC NJM4580L	
IC701	8-749-921-60	IC STK3042MK3	
IC702	8-759-501-55	IC BA6125	
IC703	8-759-710-73	IC NJM4580L	
IC752	8-759-501-55	IC BA6125	
IC802	8-759-501-47	IC LM78M12	
IC803	8-759-604-45	IC M5F79M12L	
		< COIL >	
L701	* 1-420-872-00	COIL, AIR CORE	
L751	* 1-420-872-00	COIL, AIR CORE	
		< PHOTO INTERRUPTER >	
PH701	8-719-946-27	DIODE PC837	
PH751	8-719-946-27	DIODE PC837	
		< TRANSISTOR >	
Q401	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q402	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q403	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q404	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q405	8-729-141-30	TRANSISTOR 2SC3623A-LK	

MAIN | TRANSFORMER TERMINAL | IMPEDANCE SELECTOR | CONNECTOR (B) | VOL LED

Ref. No.	Part No.	Description	Remark
Q406	8-729-900-36	TRANSISTOR DTC124ES	
Q407	8-729-900-36	TRANSISTOR DTC124ES	
Q453	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q454	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q455	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q702	8-729-141-46	TRANSISTOR 2SC4431-LK	
Q703	8-729-141-37	TRANSISTOR 2SA1684-LK	
Q706	8-729-140-82	TRANSISTOR 2SA988-PAFAEA	
Q707	8-729-140-82	TRANSISTOR 2SA988-PAFAEA	
Q708	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA	
Q709	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q710	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q711	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q752	8-729-141-46	TRANSISTOR 2SC4431-LK	
Q753	8-729-141-37	TRANSISTOR 2SA1684-LK	
Q756	8-729-140-82	TRANSISTOR 2SA988-PAFAEA	
Q757	8-729-140-82	TRANSISTOR 2SA988-PAFAEA	
Q820	8-729-141-06	TRANSISTOR 2SA1142-QPE	
		< RESISTOR >	
R401	1-249-411-11	CARBON 330 5% 1/4W	
R403	1-249-417-11	CARBON 1K 5% 1/4W	
R404	1-249-417-11	CARBON 1K 5% 1/4W	
R405	1-249-417-11	CARBON 1K 5% 1/4W	
R406	1-249-437-11	CARBON 47K 5% 1/4W	
R411	1-249-417-11	CARBON 1K 5% 1/4W	
R412	1-249-437-11	CARBON 47K 5% 1/4W	
R420	1-249-417-11	CARBON 1K 5% 1/4W	
R421	1-249-437-11	CARBON 47K 5% 1/4W	
R423	1-249-437-11	CARBON 47K 5% 1/4W	
R424	1-249-441-11	CARBON 100K 5% 1/4W	
R425	1-249-417-11	CARBON 1K 5% 1/4W	
R426	1-247-897-11	CARBON 560K 5% 1/4W	
R427	1-249-437-11	CARBON 47K 5% 1/4W	
R428	1-249-441-11	CARBON 100K 5% 1/4W	
R429	1-249-417-11	CARBON 1K 5% 1/4W	
R433	1-249-425-11	CARBON 4.7K 5% 1/4W	
R434	1-249-429-11	CARBON 10K 5% 1/4W	
R435	1-249-429-11	CARBON 10K 5% 1/4W	
R436	1-249-425-11	CARBON 4.7K 5% 1/4W	
R437	1-249-429-11	CARBON 10K 5% 1/4W	
R438	1-249-441-11	CARBON 100K 5% 1/4W	
R439	1-249-421-11	CARBON 2.2K 5% 1/4W	
R440	1-249-417-11	CARBON 1K 5% 1/4W	
R441	1-249-405-11	CARBON 100 5% 1/4W	
R442	1-249-441-11	CARBON 100K 5% 1/4W	
R443	1-249-441-11	CARBON 100K 5% 1/4W	
R444	1-249-441-11	CARBON 100K 5% 1/4W	
R451	1-249-411-11	CARBON 330 5% 1/4W	

Ref. No.	Part No.	Description	Remark
R453	1-249-417-11	CARBON 1K 5% 1/4W	
R454	1-249-417-11	CARBON 1K 5% 1/4W	
R455	1-249-417-11	CARBON 1K 5% 1/4W	
R456	1-249-437-11	CARBON 47K 5% 1/4W	
R461	1-249-417-11	CARBON 1K 5% 1/4W	
R462	1-249-437-11	CARBON 47K 5% 1/4W	
R470	1-249-417-11	CARBON 1K 5% 1/4W	
R471	1-249-437-11	CARBON 47K 5% 1/4W	
R473	1-249-437-11	CARBON 47K 5% 1/4W	
R474	1-249-441-11	CARBON 100K 5% 1/4W	
R475	1-249-417-11	CARBON 1K 5% 1/4W	
R476	1-247-897-11	CARBON 560K 5% 1/4W	
R477	1-249-437-11	CARBON 47K 5% 1/4W	
R478	1-249-441-11	CARBON 100K 5% 1/4W	
R479	1-249-417-11	CARBON 1K 5% 1/4W	
R486	1-249-425-11	CARBON 4.7K 5% 1/4W	
R487	1-249-429-11	CARBON 10K 5% 1/4W	
R490	1-249-417-11	CARBON 1K 5% 1/4W	
R491	1-249-405-11	CARBON 100 5% 1/4W	
R494	1-249-441-11	CARBON 100K 5% 1/4W	
R501	1-249-437-11	CARBON 47K 5% 1/4W	
R502	1-249-437-11	CARBON 47K 5% 1/4W	
R506	1-249-417-11	CARBON 1K 5% 1/4W	
R507	1-249-417-11	CARBON 1K 5% 1/4W	
R551	1-249-437-11	CARBON 47K 5% 1/4W	
R552	1-249-437-11	CARBON 47K 5% 1/4W	
R556	1-249-417-11	CARBON 1K 5% 1/4W	
R557	1-249-417-11	CARBON 1K 5% 1/4W	
R701	1-249-417-11	CARBON 1K 5% 1/4W	
R702	1-247-878-00	CARBON 91K 5% 1/4W	
R703	1-249-415-11	CARBON 680 5% 1/4W	
R704	1-249-413-11	CARBON 470 5% 1/4W	
R705	1-249-441-11	CARBON 100K 5% 1/4W	
R706	1-249-417-11	CARBON 1K 5% 1/4W	
R708	1-249-412-11	CARBON 390 5% 1/4W	
R709 ⚠•	1-247-704-11	CARBON 220 5% 1/4W	
R710 ⚠•	1-249-455-11	CARBON 4.7 5% 1/4W	
R711 ⚠•	1-249-455-11	CARBON 4.7 5% 1/4W	
R712 ⚠•	1-214-789-00	RES, METAL PLATE 0.1	
R713 ⚠•	1-214-789-00	RES, METAL PLATE 0.1	
R714	1-249-417-11	CARBON 1K 5% 1/4W	
R716	1-249-431-11	CARBON 15K 5% 1/4W	
R717	1-249-417-11	CARBON 1K 5% 1/4W	
R718	1-249-431-11	CARBON 15K 5% 1/4W	
R719	1-249-433-11	CARBON 22K 5% 1/4W	
R720	1-249-482-11	CARBON 4.7 5% 1/2W	

Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Note:
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le neméro spécifié.

MAIN | TRANSFORMER TERMINAL | IMPEDANCE SELECTOR | CONNECTOR (B) | VOL LED | POWER SUPPLY

Ref. No.	Part No.	Description			Remark
R721	1-247-727-11	CARBON	10	5%	1/2W
R722	1-249-429-11	CARBON	10K	5%	1/4W
R723	1-249-437-11	CARBON	47K	5%	1/4W
R730	1-249-429-11	CARBON	10K	5%	1/4W
R731	1-249-437-11	CARBON	47K	5%	1/4W
R732	1-249-417-11	CARBON	1K	5%	1/4W
R733	1-249-436-11	CARBON	39K	5%	1/4W
R740	1-249-429-11	CARBON	10K	5%	1/4W
R741	1-249-427-11	CARBON	6.8K	5%	1/4W
R742	1-247-848-11	CARBON	5.1K	5%	1/4W
R743	1-249-433-11	CARBON	22K	5%	1/4W
R744	1-249-441-11	CARBON	100K	5%	1/4W
R745	1-249-429-11	CARBON	10K	5%	1/4W
R746	1-249-417-11	CARBON	1K	5%	1/4W
R747	1-249-427-11	CARBON	6.8K	5%	1/4W
R748	1-249-441-11	CARBON	100K	5%	1/4W
R749	1-249-441-11	CARBON	100K	5%	1/4W
R751	1-249-417-11	CARBON	1K	5%	1/4W
R752	1-247-878-00	CARBON	91K	5%	1/4W
R753	1-249-415-11	CARBON	680	5%	1/4W
R754	1-249-413-11	CARBON	470	5%	1/4W
R755	1-249-441-11	CARBON	100K	5%	1/4W
R756	1-249-417-11	CARBON	1K	5%	1/4W
R758	1-249-412-11	CARBON	390	5%	1/4W
R759 ⚠·	1-247-704-11	CARBON	220	5%	1/4W
R760 ⚠·	1-249-455-11	CARBON	4.7	5%	1/4W
R761 ⚠·	1-249-455-11	CARBON	4.7	5%	1/4W
R762 ⚠·	1-214-789-00	RES, METAL PLATE	0.1		
R763 ⚠·	1-214-789-00	RES, METAL PLATE	0.1		
R764	1-249-417-11	CARBON	1K	5%	1/4W
R766	1-249-431-11	CARBON	15K	5%	1/4W
R767	1-249-417-11	CARBON	1K	5%	1/4W
R768	1-249-431-11	CARBON	15K	5%	1/4W
R769	1-249-434-11	CARBON	27K	5%	1/4W
R770	1-249-482-11	CARBON	4.7	5%	1/2W
R771	1-247-727-11	CARBON	10	5%	1/2W
R790	1-249-429-11	CARBON	10K	5%	1/4W
R791	1-249-427-11	CARBON	6.8K	5%	1/4W
R792	1-247-848-11	CARBON	5.1K	5%	1/4W
R793	1-249-433-11	CARBON	22K	5%	1/4W
R794	1-249-441-11	CARBON	100K	5%	1/4W
R795	1-249-429-11	CARBON	10K	5%	1/4W
R796	1-249-417-11	CARBON	1K	5%	1/4W
R797	1-249-427-11	CARBON	6.8K	5%	1/4W
R798	1-249-441-11	CARBON	100K	5%	1/4W
R799	1-249-441-11	CARBON	100K	5%	1/4W
R820	1-249-429-11	CARBON	10K	5%	1/4W
R821 ⚠·	1-247-752-11	CARBON	1K	5%	1/2W F
R822 ⚠·	1-212-934-00	FUSIBLE	1	5%	1/2W F

Ref. No.	Part No.	Description			Remark
R823 ⚠·	1-212-934-00	FUSIBLE	1	5%	1/2W F
R824 ⚠·	1-212-958-00	FUSIBLE	10	5%	1/2W F
R825 ⚠·	1-212-958-00	FUSIBLE	10	5%	1/2W F
R826	1-249-389-11	CARBON	4.7	5%	1/4W
R827	1-249-389-11	CARBON	4.7	5%	1/4W
		< VARIABLE RESISTOR >			
RV701	1-238-596-11	RES, ADJ, CAREBON	470		(BIAS)
RV751	1-238-596-11	RES, ADJ, CAREBON	470		(BIAS)
		< RELAY >			
RY701	1-515-726-11	RELAY			
RY710	1-515-726-11	RELAY			
		< SWITCH >			
S801	1-571-309-31	SWITCH (SPEAKER IMPEDANCE SELECTOR)			
		**********			
	* A-4345-070-A	POWER SUPPLY BOARD, COMPLETE (US)			
	* A-4345-078-A	POWER SUPPLY BOARD, COMPLETE (Canadian)			
		**********			
	1-533-225-11	HOLDER, FUSE			
	* 1-535-139-00	BASE POST 19MM (10MM PITCH) 2P			
	* 3-309-144-21	HEAT SINK			
	* 4-942-204-01	PLATE, GROUND			
	7-682-547-04	SCREW +BVTT 3X6 (S)			
		< CAPACITOR >			
C801	1-101-004-00	CERAMIC	0.01uF		50V
C802	1-101-004-00	CERAMIC	0.01uF		50V
C803	1-164-073-11	CERAMIC	100PF	10%	50V
C804	1-124-907-11	ELECT	10uF	20%	50V
C805	1-124-477-11	ELECT	47uF	20%	25V
C806	1-124-464-11	ELECT	0.22uF	20%	50V
C807	1-124-902-00	ELECT	0.47uF	20%	50V
C808	1-101-004-00	CERAMIC	0.01uF		50V
C809	1-124-557-11	ELECT	1000uF	20%	25V
C810	1-124-903-11	ELECT	1uF	20%	50V
C901 ⚠·	1-161-744-00	CERAMIC	0.01uF		400V
		< CONNECTOR >			
CNP801 *	1-564-104-00	PIN, CONNECTOR 3P			
CNP803 *	1-569-396-11	PIN, CONNECTOR 4P			
CNP901 *	1-564-321-00	PIN, CONNECTOR 2P			
CNS901 ⚠·	1-540-059-11	OUTLET, AC (POLAR)			

Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Note:
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le neméro spécifié.

POWER SUPPLY | PS TERMINAL | TONE

Ref. No.	Part No.	Description			Remark
		< DIODE >			
D801	8-719-912-20	DIODE 1S6120			
D802	8-719-912-20	DIODE 1SS120			
D803	8-719-912-20	DIODE 1SS120			
D804	8-719-200-82	DIODE 11ES2			
D805	8-719-200-82	DIODE 11ES2			
D806	8-719-200-82	DIODE 11ES2			
D807	8-719-200-82	DIODE 11ES2			
D808	8-719-933-41	DIODE HZS6C3L			
D809	8-719-914-11	DIODE HZ4ALL			
D810	8-719-912-20	DIODE 1SS120			
D811	8-719-933-41	DIODE HZS6C3L			
D812	8-719-014-66	DIODE UZP-5.6B			
		< TRANSISTOR >			
Q802	8-729-620-05	TRANSISTOR 2SC2603-EF			
Q803	8-729-209-15	TRANSISTOR 2SD2012			
Q804	8-729-620-05	TRANSISTOR 2SC2603-EF			
Q805	8-729-119-76	TRANSISTOR 2SA1175-HFE			
Q806	8-729-119-76	TRANSISTOR 2SA1175-HFE			
Q807	8-729-900-63	TRANSISTOR DTA124ES			
Q808	8-729-620-05	TRANSISTOR 2SC2603-EF			
Q809	8-729-900-89	TRANSISTOR DTC144ES			
		< RESISTOR >			
R801 ⚠·	1-247-691-11	CARBON	18	5%	1/4W
R802	1-249-417-11	CARBON	1K	5%	1/4W
R804	1-249-433-11	CARBON	22K	5%	1/4W
R805	1-249-437-11	CARBON	47K	5%	1/4W
R806	1-249-425-11	CARBON	4.7K	5%	1/4W
R807	1-249-429-11	CARBON	10K	5%	1/4W
R808	1-249-417-11	CARBON	1K	5%	1/4W
R809	1-249-429-11	CARBON	10K	5%	1/4W
R810	1-249-429-11	CARBON	10K	5%	1/4W
R812	1-249-426-11	CARBON	5.6K	5%	1/4W
R813	1-249-417-11	CARBON	1K	5%	1/4W
R814	1-249-426-11	CARBON	5.6K	5%	1/4W
R815	1-247-895-00	CARBON	470K	5%	1/4W
R901	1-202-725-00	SOLID	3.3M	10%	1/2W
		< RELAY >			
RY901 ⚠·	1-515-720-11	RELAY			
		< TRANSFORMER >			
T901 ⚠·	1-448-517-21	TRANSFORMER, POWER			
		< VARISTOR >			
VZ901	1-807-293-31	VARISTOR SNR-14A221U			

Ref. No.	Part No.	Description			Remark
*	1-639-877-11	PS TERMINAL BOARD			
		**********			
		< CONNECTOR >			
CNP705 *	1-569-396-11	PIN, CONNECTOR 4P			
		< DIODE >			
D710	8-719-912-20	DIODE 1SS120			
D711	8-719-912-20	DIODE 1SS120			
D712	8-719-912-20	DIODE 1SS120			
D713	8-719-912-20	DIODE 1SS120			
D714	8-719-912-20	DIODE 1SS120			
D715	8-719-912-20	DIODE 1SS120			
		< TRANSISTOR >			
Q720	8-729-620-05	TRANSISTOR 2SC2603-EF			
Q721	8-729-620-05	TRANSISTOR 2SC2603-EF			
		< RESISTOR >			
R734	1-249-425-11	CARBON	4.7K	5%	1/4W
R736	1-249-437-11	CARBON	47K	5%	1/4W
R737	1-249-425-11	CARBON	4.7K	5%	1/4W
R738	1-249-437-11	CARBON	47K	5%	1/4W
R739 ⚠·	1-247-735-11	CARBON	47	5%	1/2W
		< RELAY >			
RY702	1-515-626-11	RELAY			
RY703	1-515-626-11	RELAY			
		< TERMINAL >			
TM701	1-537-235-11	TERMINAL BOARD (SP)			
**********					
*	A-4345-063-A	TONE BOARD, COMPLETE			
		**********			
*	1-535-624-11	TERMINAL, PIN JACK			
		< CAPACITOR >			
C601	1-130-485-00	MYLAR	0.015uF	5%	50V
C602	1-130-474-00	MYLAR	0.0018uF	5%	50V
C603	1-106-363-00	MYLAR	6800PF	5%	200V
C604	1-106-359-00	MYLAR	4700PF	5%	200V
C605	1-130-489-00	MYLAR	0.033uF	5%	50V
C610	1-124-273-00	ELECT	3.3uF	20%	50V
C611	1-162-294-31	CERAMIC	0.001uF	10%	50V
C651	1-130-485-00	MYLAR	0.015uF	5%	50V
C652	1-130-474-00	MYLAR	0.0018uF	5%	50V
C653	1-106-363-00	MYLAR	6800PF	5%	200V

Note:
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Replace only with part number specified.

Note:
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Ne les remplacer que par une pièce portant le neméro spécifié.

TONE TUNER

Ref. No.	Part No.	Description			Remark
C654	1-106-359-00	MYLAR	4700PF	5%	200V
C655	1-130-489-00	MYLAR	0.033uF	5%	50V
		< CONNECTOR >			
CNS603 *	1-564-505-11	PLUG, CONNECTOR 2P			
CNS604 *	1-568-824-11	SOCKET, CONNECTOR 5P			
		< RESISTOR >			
R601	1-249-438-11	CARBON	56K	5%	1/4W
R602	1-249-426-11	CARBON	5.6K	5%	1/4W
R603	1-249-421-11	CARBON	2.2K	5%	1/4W
R604	1-247-870-11	CARBON	43K	5%	1/4W
R606	1-247-852-11	CARBON	7.5K	5%	1/4W
R607	1-249-437-11	CARBON	47K	5%	1/4W
R608	1-249-429-11	CARBON	10K	5%	1/4W
R609	1-247-903-00	CARBON	1M	5%	1/4W
R610	1-247-903-00	CARBON	1M	5%	1/4W
R614	1-249-418-11	CARBON	1.2K	5%	1/4W
R620	1-249-436-11	CARBON	39K	5%	1/4W
R651	1-249-438-11	CARBON	56K	5%	1/4W
R652	1-249-426-11	CARBON	5.6K	5%	1/4W
R653	1-249-421-11	CARBON	2.2K	5%	1/4W
R654	1-247-870-11	CARBON	43K	5%	1/4W
R656	1-247-852-11	CARBON	7.5K	5%	1/4W
R657	1-249-437-11	CARBON	47K	5%	1/4W
R658	1-249-429-11	CARBON	10K	5%	1/4W
R659	1-247-903-00	CARBON	1M	5%	1/4W
R660	1-247-903-00	CARBON	1M	5%	1/4W
R670	1-249-436-11	CARBON	39K	5%	1/4W
		< VARIABLE RESISTOR >			
RV601	1-241-560-11	RES, VAR, CARBON 150K150K (BALANCE)			
RV602	1-241-561-11	RES, VAR, CARBON 250K/250K (TREBLE)			
RV603	1-241-559-11	RES, VAR, CARBON 25K/500K (BASS)			
RV604	1-238-628-21	RES, VAR, CARBON (MOTOR) 120KX2 (ATTENUATOR)			
		< SWITCH >			
S601	1-572-261-11	SWITCH, PUSH (2 KEY) (LOUNDNESS, SOURCE DIRECT)			

****

* A-4345-074-A TUNER BOARD, COMPLETE

****

* 4-924-988-11 PLATE (ST), GROUND

Ref. No.	Part No.	Description			Remark
		< CAPACITOR >			
C1	1-162-294-31	CERAMIC	0.001uF	10%	50V
C2	1-124-477-11	ELECT	47uF	20%	25V
C3	1-161-379-00	CERAMIC	0.01uF	20%	25V
C4	1-162-294-31	CERAMIC	0.001uF	10%	50V
C5	1-161-379-00	CERAMIC	0.01uF	20%	25V
C6	1-161-379-00	CERAMIC	0.01uF	20%	25V
C9	1-161-379-00	CERAMIC	0.01uF	20%	25V
C11	1-161-494-00	CERAMIC	0.022uF		25V
C21	1-161-021-11	CERAMIC	0.047uF	10%	25V
C22	1-161-379-00	CERAMIC	0.01uF	20%	25V
C23	1-124-477-11	ELECT	47uF	20%	25V
C24	1-123-382-00	ELECT	3.3uF	20%	100V
C25	1-161-379-00	CERAMIC	0.01uF	20%	25V
C26	1-161-329-00	CERAMIC	0.0068uF	30%	16V
C27	1-162-282-31	CERAMIC	100PF	10%	50V
C28	1-124-903-11	ELECT	1uF	20%	50V
C30	1-124-903-11	ELECT	1uF	20%	50V
C31	1-124-902-00	ELECT	0.47uF	20%	50V
C32	1-124-463-00	ELECT	0.1uF	20%	50V
C33	1-130-482-00	MYLAR	0.0082uF	5%	50V
C34	1-123-382-00	ELECT	3.3uF	20%	100V
C35	1-130-482-00	MYLAR	0.0082uF	5%	50V
C36	1-123-382-00	ELECT	3.3uF	20%	100V
C37	1-124-907-11	ELECT	10uF	20%	50V
C40	1-124-463-00	ELECT	0.1uF	20%	50V
C41	1-124-927-11	ELECT	4.7uF	20%	100V
C42	1-161-379-00	CERAMIC	0.01uF	20%	25V
C43	1-126-176-11	ELECT	220uF	20%	10V
C44	1-161-379-00	CERAMIC	0.01uF	20%	25V
C45	1-123-382-00	ELECT	3.3uF	20%	100V
C46	1-161-375-00	CERAMIC	0.0022uF	20%	50V
C48	1-123-382-00	ELECT	3.3uF	20%	100V
C49	1-161-375-00	CERAMIC	0.0022uF	20%	50V
C51	1-124-477-11	ELECT	47uF	20%	25V
C61	1-161-494-00	CERAMIC	0.022uF		25V
C63	1-161-379-00	CERAMIC	0.01uF	20%	25V
C81	1-102-961-00	CERAMIC	27PF	5%	50V
C82	1-102-961-00	CERAMIC	27PF	5%	50V
C85	1-161-379-00	CERAMIC	0.01uF	20%	25V
C86	1-124-477-11	ELECT	47uF	20%	25V
C87	1-161-379-00	CERAMIC	0.01uF	20%	25V
C88	1-161-379-00	CERAMIC	0.01uF	20%	25V
C101	1-124-925-11	ELECT	2.2uF	20%	100V
C102	1-124-463-00	ELECT	0.1uF	20%	50V
C103	1-161-379-00	CERAMIC	0.01uF	20%	25V
C104	1-161-379-00	CERAMIC	0.01uF	20%	25V
C105	1-124-477-11	ELECT	47uF	20%	25V

TUNER

Ref. No.	Part No.	Description				Remark
		< FILTER >				
CF1	1-567-389-11	FILTER, CERAMIC				
CF2	1-567-389-11	FILTER, CERAMIC				
CF21	1-577-075-11	OSCILLATOR, CERAMIC				
CFT21	1-404-853-11	TRANSFORMER, IF (CERAMIC FILTER)				
		< CONNECTOR >				
CNS1	1-569-492-11	SOCKET, CONNECTOR 6P				
CNS2	* 1-569-493-11	SOCKET, CONNECTOR 7P				
		< FRONT END >				
FE1	1-463-862-21	FRONT END, FM				
FE61	1-236-461-11	ENCAPSULATED COMPONENT				
		< IC >				
IC21	8-759-821-45	IC LA1851N				
IC81	8-759-820-91	IC LC7218				
		< COIL >				
L1	1-410-521-11	INDUCTOR	100uH			
L21	1-410-171-11	INDUCTOR	1mH			
L301	1-410-509-11	INDUCTOR	10uH			
		< FILTER >				
LPF21	1-235-164-00	FILTER, LOW PASS				
LPF22	1-235-164-00	FILTER, LOW PASS				
		< TRANSISTOR >				
Q1	8-729-230-XX	TRANSISTOR 2SC2669-OY				
Q2	8-729-230-XX	TRANSISTOR 2SC2669-OY				
Q21	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q22	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q23	8-729-900-61	TRANSISTOR DTA114ES				
Q24	8-729-900-80	TRANSISTOR DTC114ES				
Q81	8-729-900-61	TRANSISTOR DTA114ES				
Q82	8-729-900-80	TRANSISTOR DTC114ES				
Q83	8-729-202-67	TRANSISTOR 2SK246-GR3				
Q84	8-729-230-93	TRANSISTOR 2SC3113-AB				
		< RESISTOR >				
R1	⚠· 1-249-401-11	CARBON	47	5%	1/4W	
R3	1-249-411-11	CARBON	330	5%	1/4W	
R4	1-249-411-11	CARBON	330	5%	1/4W	
R5	1-249-411-11	CARBON	330	5%	1/4W	
R6	1-249-432-11	CARBON	18K	5%	1/4W	
R7	1-249-411-11	CARBON	330	5%	1/4W	
R8	1-249-414-11	CARBON	560	5%	1/4W	
R9	1-249-434-11	CARBON	27K	5%	1/4W	
R21	⚠· 1-249-404-00	CARBON	82	5%	1/4W	
R22	1-249-428-11	CARBON	8.2K	5%	1/4W	
R23	1-249-417-11	CARBON	1K	5%	1/4W	
R24	1-249-435-11	CARBON	33K	5%	1/4W	
R25	1-249-428-11	CARBON	8.2K	5%	1/4W	
R27	1-249-432-11	CARBON	18K	5%	1/4W	
R28	1-249-423-11	CARBON	3.3K	5%	1/4W	
R29	1-249-429-11	CARBON	10K	5%	1/4W	
R31	1-249-413-11	CARBON	470	5%	1/4W	
R32	1-249-429-11	CARBON	10K	5%	1/4W	
R33	1-249-429-11	CARBON	10K	5%	1/4W	
R35	1-249-437-11	CARBON	47K	5%	1/4W	
R36	1-249-429-11	CARBON	10K	5%	1/4W	
R37	1-249-441-11	CARBON	100K	5%	1/4W	
R38	1-247-887-00	CARBON	220K	5%	1/4W	
R39	1-249-421-11	CARBON	2.2K	5%	1/4W	
R40	1-249-420-11	CARBON	1.8K	5%	1/4W	
R41	1-249-426-11	CARBON	5.6K	5%	1/4W	
R42	1-249-441-11	CARBON	100K	5%	1/4W	
R43	1-247-887-00	CARBON	220K	5%	1/4W	
R44	1-249-421-11	CARBON	2.2K	5%	1/4W	
R45	1-249-420-11	CARBON	1.8K	5%	1/4W	
R46	1-249-426-11	CARBON	5.6K	5%	1/4W	
R47	⚠· 1-249-409-11	CARBON	220	5%	1/4W	
R61	1-249-441-11	CARBON	100K	5%	1/4W	
R62	1-249-437-11	CARBON	47K	5%	1/4W	
R63	1-249-397-11	CARBON	22	5%	1/4W	
R81	1-249-417-11	CARBON	1K	5%	1/4W	
R82	1-249-417-11	CARBON	1K	5%	1/4W	
R83	1-249-417-11	CARBON	1K	5%	1/4W	
R86	1-249-417-11	CARBON	1K	5%	1/4W	
R87	1-249-429-11	CARBON	10K	5%	1/4W	
R91	1-249-417-11	CARBON	1K	5%	1/4W	
R92	⚠· 1-249-401-11	CARBON	47	5%	1/4W	
R101	1-249-423-11	CARBON	3.3K	5%	1/4W	
R102	1-249-414-11	CARBON	560	5%	1/4W	
R103	1-249-417-11	CARBON	1K	5%	1/4W	
R104	1-249-410-11	CARBON	270	5%	1/4W	
R105	1-249-425-11	CARBON	4.7K	5%	1/4W	
R106	1-249-421-11	CARBON	2.2K	5%	1/4W	
R107	1-249-425-11	CARBON	4.7K	5%	1/4W	
R108	1-249-405-11	CARBON	100	5%	1/4W	
R109	1-249-425-11	CARBON	4.7K	5%	1/4W	
R110	⚠· 1-249-405-11	CARBON	100	5%	1/4W	

Note:	Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le neméro spécifié.

TUNER

Ref. No.	Part No.	Description	Remark
		< VARIABLE RESISTOR >	
RV21	1-238-598-11	RES, ADJ, CARBON 2.2K (FM SEPARATION)	
RV23	1-238-604-11	RES, ADJ, CARBON 220K (SIGNAL)	
RV24	1-238-601-11	RES, ADJ, CARBON 22K (FM TUNING LEVEL)	
		< TRANSFORMER >	
T21	1-404-807-11	TRANSFORMER, DISCRIMINATOR (NULL)	
		< TERMINAL >	
TM1	1-537-238-21	TERMINAL BOARD (ANTENNA)	
		< TEST PIN >	
TP1	* 1-560-060-00	PIN, CONNECTOR 2P (NULL)	
		< VIBRATOR >	
XT81	⚠ 1-577-126-11	VIBRATOR, CRYSTAL (7.2MHz)	
**********			
		MISCELLANEOUS	
		**********	
64	1-575-664-11	WIRE, FLAT TYPE (23 CORE)	
65	1-575-662-11	WIRE, FLAT TYPE (5 CORE)	
159	⚠ 1-575-975-11	CORD, POWER	
F801	⚠ 1-532-748-11	FUSE, GLASS TUBE 6.3A 125V	
F802	⚠ 1-532-748-11	FUSE, GLASS TUBE 6.3A 125V	
F901	⚠ 1-532-746-11	FUSE, GLASS TUBE 4A 125V	
F902	⚠ 1-532-747-11	FUSE, GLASS TUBE 5A 125V (Canadian)	
Q701	8-729-209-15	TRANSISTOR 2SD2012	
Q704	8-729-321-30	TRANSISTOR 2SC4385-OY	
Q705	8-729-321-27	TRANSISTOR 2SA1670-OY	
Q751	8-729-209-15	TRANSISTOR 2SD2012	
Q754	8-729-321-30	TRANSISTOR 2SC4385-OY	
Q755	8-729-321-27	TRANSISTOR 2SA1670-OY	
T902	⚠ 1-449-970-11	TRANSFORMER, POWER (US)	
T902	⚠ 1-450-188-11	TRANSFORMER, POWER (Canadian)	
**********			
		ACCESSORY & PACKING MATERIAL	
		**********	
	1-501-374-11	ANTENNA, LOOP	
	3-753-168-21	MANUAL, INSTRUCTION (ENGLISH)	
	* 4-931-623-01	CUSHION	
	* 4-945-641-01	INDIVIDUAL CARTON	

HARDWARE LIST

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Ref. No.	Part No.	Description	Remark
# 1	7-682-548-09	SCREW +BVTT 3X8 (S)	
# 2	7-682-548-04	SCREW +BVTT 3X8 (S)	
# 3	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S	
# 4	7-682-547-04	SCREW +BVTT 3X6 (S)	
# 5	7-682-549-04	SCREW +B 3X10	
# 6	7-682-561-04	SCREW +BVTT 4X8 (S)	
# 7	7-685-646-79	SCREW +BTP 3X8 TYPE2 N-S	

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	**Note:** Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le neméro spécifié.

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Audio Group

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